

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF VIRGINIA
HARRISONBURG DIVISION

PARKER COMPOUND BOWS, INC.,

Plaintiff,

v.

HUNTER'S MANUFACTURING COMPANY, INC.,
d/b/a TENPOINT CROSSBOW TECHNOLOGIES,

Defendant.

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) Civil Action No. 5:14cv00004
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) By: Michael F. Urbanski
) United States District Judge
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MEMORANDUM OPINION

Plaintiff Parker Compound Bows, Inc. brings this declaratory judgment action against defendant Hunter's Manufacturing Company, Inc. d/b/a TenPoint Crossbow Technologies ("TenPoint"),¹ seeking a declaration that Parker's crossbows do not infringe certain of TenPoint's patents and that TenPoint's patents are invalid. TenPoint counterclaims, alleging infringement of five patents in the same patent family describing certain aspects of a narrow crossbow with a large power stroke. This matter is currently before the court for claim construction pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996). The issues have been thoroughly briefed and argued and are ripe for adjudication.

I.

TenPoint is the owner of U.S. Patent No. 8,191,541 (the "541 Patent"); U.S. Patent No. 8,439,025 (the "025 Patent"); U.S. Patent No. 8,469,012 (the "012 Patent"); U.S. Patent No. 8,479,719 (the "719 Patent"); and U.S. Patent No. 8,763,595 (the "595 Patent"), all of which are titled "Narrow Crossbow with Large Power Stroke." These patents describe largely the same subject matter and share similar illustrations, abstracts, backgrounds and written descriptions, but

¹ Parker refers to defendant as "Hunter's" on brief. Defendant refers to itself, however, as "TenPoint" and so will the court.

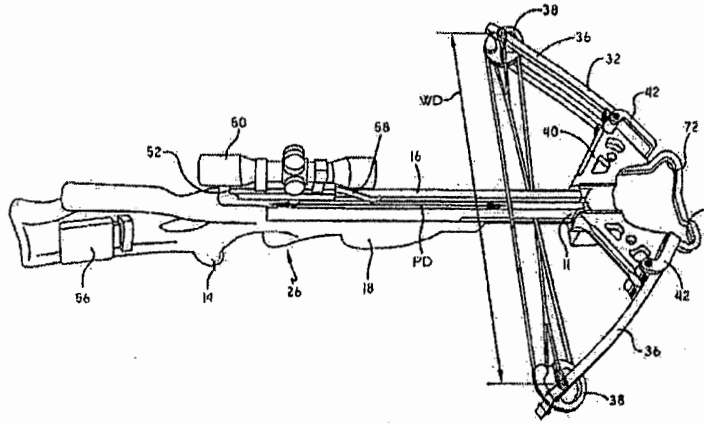
vary in claim scope.²

Crossbows, used for hunting and fishing and target shooting, generally have certain features, according to the patents-in-suit. One such feature is a bow assembly mounted to the main beam, comprised of a bow and bowstring used to shoot arrows. A trigger mechanism, also mounted to the main beam, holds the bowstring in a cocked position. Certain crossbows called compound bows have wheels at the opposite ends of the bow that receive the bowstring. The distance between these wheels when the crossbow is in an uncocked position is called the wheel distance. The power stroke of a crossbow is the linear distance along the main beam that the bowstring moves between the uncocked and cocked condition. Large power strokes—in the range of 16, 17, or 18 inches—are desired, as they provide the potential for more speed and energy. But previous crossbows touting large power strokes came with several disadvantages, such as difficulty cocking and a width that reduces maneuverability. The patents-in-suit claim improvement over the prior art by creating a narrow crossbow with a large powerstroke that is more compact and maneuverable and easy to manually cock. The illustration appearing on the first page of each of the patents-in-suit is representative:

² TenPoint filed a Provisional Application on December 1, 2006, describing a narrow crossbow. On November 30, 2007, TenPoint filed Application No. 11/948,319, which issued as U.S. Patent No. 7,832,386 on November 16, 2010. This patent is not challenged in this suit.

TenPoint filed a continuation-in-part application, which issued as the '541 Patent on June 5, 2012. It filed three divisional applications of the '541 Patent, which issued as the '025 Patent on May 24, 2013, the '012 Patent on June 25, 2013, and the '719 Patent on July 9, 2013.

TenPoint filed a continuation application of the '025 Patent, which issued as U.S. Patent No. 8,794,225 on August 5, 2014. This patent is not challenged in this suit. TenPoint filed a continuation application of this patent, which issued as the '595 Patent on July 1, 2014.



The '541 Patent, '025 Patent, '012 Patent, and '595 Patent claim crossbows having certain dimensional claims (e.g., bow limb lengths, distances between wheels, power distances and ratios of wheel distances to power distances) and certain power claims (e.g., draw weights and stored energy amounts). The claims of the '719 Claim are directed to a foot stirrup, an element that aids a user in cocking the crossbow.

TenPoint asserts this new crossbow has revolutionized the industry leading many manufacturers, including Parker, to copy TenPoint's patented invention. Parker insists TenPoint seeks to monopolize the practice of every crossbow fitting within the claimed dimensions of the patents-in-suit.

A number of claim terms are in dispute.

II.

The first step in a patent infringement case is to construe the meaning and scope of the patent claims at issue. Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995), aff'd, 517 U.S. 370 (1996). Claim construction is a matter of law exclusively for the court. Id. at 977-79; see also O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., Ltd., 521 F.3d 1351, 1360 (Fed. Cir. 2008) ("When the parties raise an actual dispute regarding the proper scope of these claims, the court, not the jury, must resolve that dispute." (citing Markman, 52 F.3d at 979)).

“To ascertain the meaning of claims, we consider three sources: The claims, the specification, and the prosecution history.” Markman, 52 F.3d at 979 (quoting Unique Concepts, Inc. v. Brown, 939 F.2d 1558, 1561 (Fed. Cir. 1991)). “Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language.” Vitronics Corp. v. Conceptiontronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996).

First, the court must look to the words of the claims themselves. The claim terms “are generally given their ordinary and customary meaning,” that is, “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” Phillips v. AWH Corp., 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (citations omitted). “The inquiry into how a person of ordinary skill in the art understands a claim term provides an objective baseline from which to begin claim interpretation.” Id. at 1313 (citing Innova/PureWater, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1116 (Fed. Cir. 2004)). “In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” Id. at 1314 (citing Brown v. 3M, 365 F.3d 1349, 1352 (Fed. Cir. 2001)).

The claims, however, do not stand alone and must be read “in view of the specification, of which they are a part.” Id. at 1315 (quoting Markman, 52 F.3d at 979). A person of ordinary skill in the art “is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” Id. at 1313. “[I]t is always necessary to review the specification to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning. The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.” Vitronics Corp., 90 F.3d at 1582 (citing Markman, 52 F.3d at 979). “[T]he

specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs." Phillips, 415 F.3d at 1316 (citing CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366 (Fed. Cir. 2002)). Thus, the specification is "always highly relevant" to the analysis. Vitronics Corp., 90 F.3d at 1582. "Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." Id.

Additionally, the court must consider the prosecution history, which contains "the complete record of all the proceedings before the Patent and Trademark Office [("PTO")], including any express representations made by the applicant regarding the scope of the claims," id., as well as "the prior art cited during the examination of the patent," Phillips, 415 F.3d at 1317 (citing Autogiro Co. of Am. v. United States, 181 Ct. Cl. 55, 384 F.2d 391, 399 (1967)). "Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent." Phillips, 415 F.3d at 1317 (citing Lemelson v. Gen Mills, Inc., 968 F.2d 1202, 1206 (Fed. Cir. 1992)).

The claims, specification and prosecution history "constitute the public record of the patentee's claim," and, generally, "an analysis of th[is] intrinsic evidence alone will resolve any ambiguity in a disputed claim term." Vitronics Corp., 90 F.3d at 1583. However, the court may, in its discretion, look to extrinsic evidence, "including expert and inventor testimony, dictionaries, and learned treatises," Phillips, 415 F.3d at 1317 (quoting Markman, 52 F.3d at 980), in order "'to aid the court in coming to a correct conclusion' as to the 'true meaning of the language employed' in the patent." Markman, 52 F.3d at 980 (quoting Seymour v. Osborne, 78 U.S. 516, 546 (1871)). Although it is "less significant than the intrinsic record in determining the legally operative meaning of claim language," Phillips, 415 F.3d at 1317 (citations omitted), extrinsic evidence "may be helpful to explain scientific principles, the meaning of technical terms, and terms of art that appear in the patent and prosecution history." Markman, 52 F.3d at 980. "Extrinsic evidence is to be used for the

court's understanding of the patent, not for the purpose of varying or contradicting the terms of the claims." *Id.* at 981. It "is not for the purpose of clarifying ambiguity in claim terminology." *Id.* at 986.

III.

The principal claim construction question to be resolved in this case is a narrow one: whether the "bow limb," also referred to in the plural as "bow limbs," referenced throughout the patents-in-suit has a thickness that varies continuously from the first end to the hinge point. Both parties agree the term has a specific meaning that must be interpreted in light of the written specification common to this family of patents. They further agree that its definition must be framed in terms of limb thickness—specifically, that a bow limb has a varying thickness from the first end to the hinge point. The parties' dispute over the proper construction of this claim term is limited to whether that thickness must vary *continuously* along the length from the first end to the hinge point.

Both parties direct the court to the following passage from the specification:

With reference now to FIGS. 1-6, a limb design according to one embodiment of this invention will now be described. Each limb 36 has a first end 60 that is received within the corresponding pocket 42 and a second end 62 that is operatively connected to the bowstring 34. Each limb 36 also has, as seen the best in FIG. 6, a length L1, a height 111³ (measured from bottom to top when the crossbow is held in the normal operating position), and a thickness T1. Each limb 36 also has a hinge point HP which is the point along the length L1 at which the thickness T1 is at a minimum. **It should be noted that the thickness T1 of the limb 36 according to one embodiment varies continuously along its length L1 from the first end 60 to the hinge point HP. This is believed to be a first in the industry as known limbs maintain a constant thickness for at least a portion (2 to 4 inches, for a non-limiting example) of the pocket engaging end. Applicants have discovered, however, that the use of a varied thickness at the first end limb provides unexpected advantages. Specifically, the varied thickness provides limbs that can withstand greater bending forces prior**

³ Subsequent patents correct this to read "a height H1." *See, e.g.*, '012 Patent, col. 4, ll. 47.

to failing under load and reduced vibrations. The position of the hinge point HP to respect to the first end 60 of the limb 36 can be any position chosen with sound judgment by a person of ordinary skill in the art. In one embodiment, shown in FIG. 6, the hinge point HP is at least 6 inches from the first end 60 of the limb 36. It should also be noted that the pockets 42 were not modified. **Thus, it is clear that the varied thickness limbs provide the advantage. As a result, the limb length L1 can be shorter than previously thought possible. This also may contribute to the reduced ratio WD/PD described above.** In one embodiment, the limb length L1 may be less than 15 inches. In a more specific embodiment, the limb length L1 may be less than 13 inches. In yet a more specific embodiment, shown in FIG. 6, the limb length L1 maybe about 12 inches. In yet a more specific embodiment, the limb length L1 maybe about 11 inches, the distance between the two pivot axis WD may be about 17.5 inches uncocked and about 13 inches when cocked. For this embodiment, the power stroke distance PD may be about 12 inches or greater.

See, e.g., '541 Patent, col. 4, ll. 16-54 (emphasis added). Relying on this passage, Parker argues that it is the continuously varying thickness of the bow limbs that allows for TenPoint's entire patent to function—that the continuously varying thickness of the bow limbs gives rise to the invention itself: “[I]t is the only novel element which purportedly allows for shorter limb lengths and corresponding dimensional claims which comprise all of the dimensional claims which constitute a ‘Narrow Crossbow with a Relatively Long Power Stroke.’” Parker's Opening Br., ECF No. 47, at 23. This is confirmed by the fact that the specification points out the disadvantages of the known limb design, which has “a constant thickness for at least a portion (2 to 4 inches, for a non-limiting example) of the pocket engaging end.” '541 Patent, col. 4, ll. 29-31. Parker argues: “By distinguishing the claimed bow limbs over the prior art, [TenPoint] has expressly described what the claims do not cover, and by implication, surrendered protection for the disclaimed subject matter.” Parker's Opening Br., ECF No. 47, at 27.

TenPoint disagrees, arguing the patents-in-suit disclose multiple inventions and multiple embodiments of constituent components, including bow limbs, related to its narrow crossbow technology. As plainly stated in the common specification, bow limbs with continuously varying

thicknesses along their length from the first end to the hinge point are but one such embodiment. See '541 Patent, col. 4, ll. 26-28; see also '025 Patent, col. 2, ll. 10-20 ("According to yet another embodiment of this invention, a bow assembly includes: . . . a first limb . . . wherein . . . the thickness of the first limb varies continuously along its length from its first end to its hinge point."). TenPoint insists that it did not clearly and unmistakably disclaim limb thickness that does not vary continuously along the length of the bow limb. Bow limbs with continuously varying thicknesses are not referred to in the patents as "preferred embodiments," or as "necessary," "critical," or "essential" to the invention claimed. Nor do the patents disparage bow limbs known in the prior art, according to TenPoint. It argues, "the mere disclosure of known embodiments of a component and of novel embodiments of that component does not automatically disclaim the known embodiment and limit the claims to just the novel embodiment of that component." TenPoint Resp. Br., ECF No. 53, at 18.

TenPoint directs the court's attention to the Provisional Application. See ECF No. 47-12. It points specifically to Figure 27, arguing it portrays an area of constant thickness at the first end.

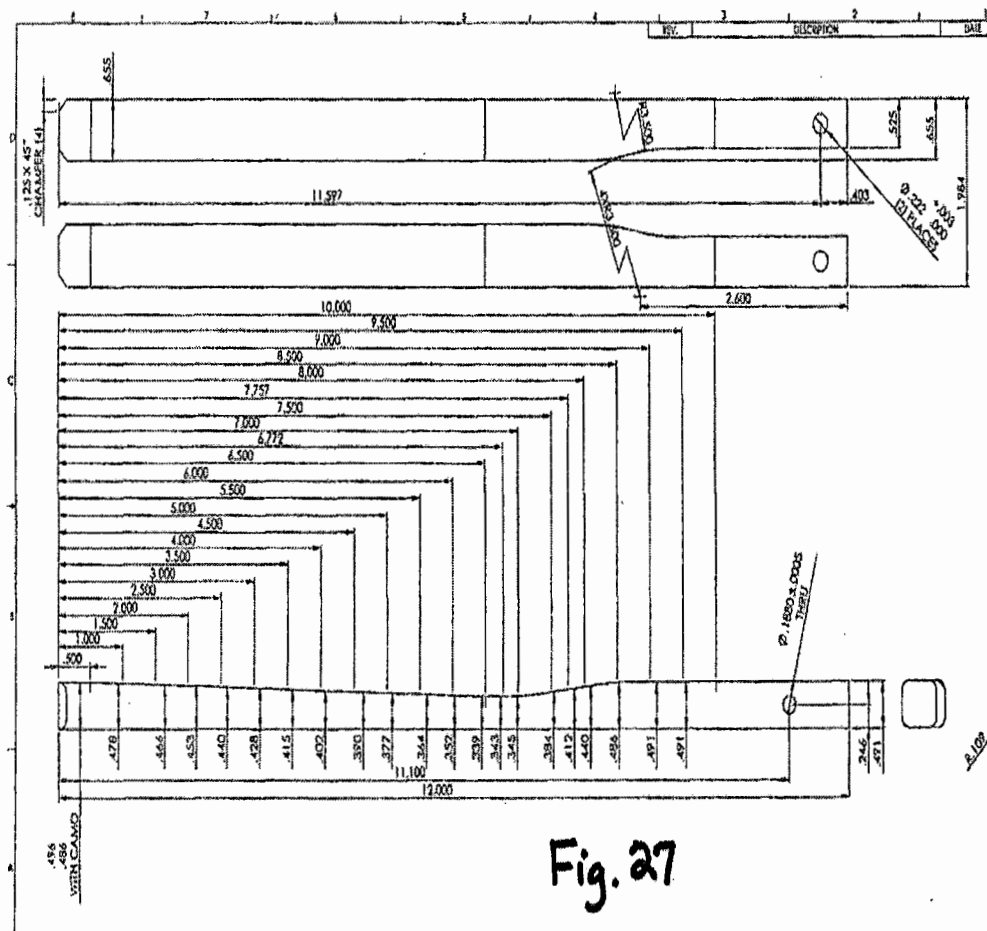
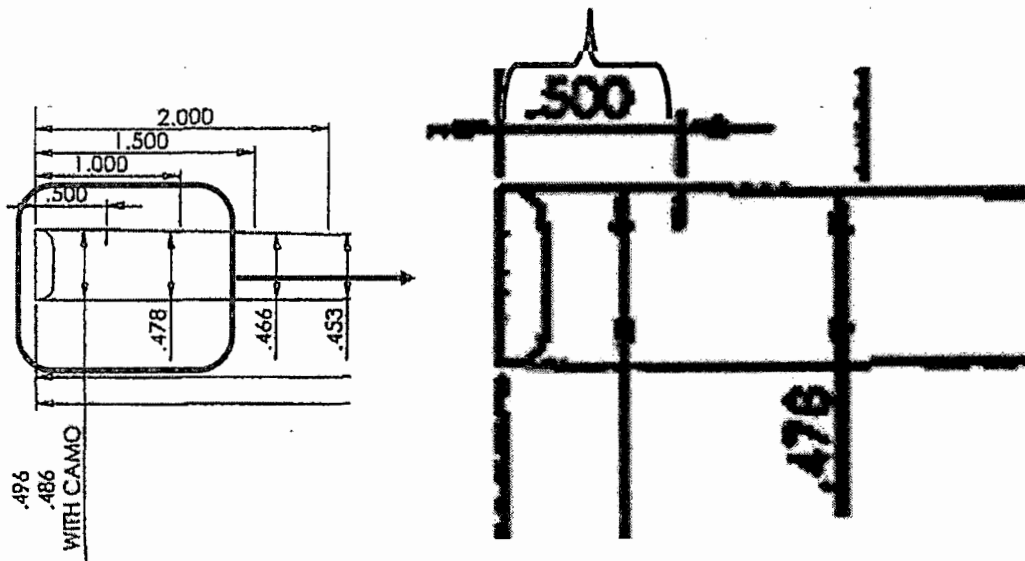


Fig. 27

TenPoint contends:

Figure 27 of the Provisional Application, which is drawn to scale and is the source of Figure 6 of the Patents-in-Suit, shows that the first 0.5 inches of the limb at the first end is constant thickness, after which the limb thickness varies to the hinge point. The below drawings show magnified portions of the first end of the limb shown in Figure 27, confirming that at least the first 0.5 inches at the first end maintains a constant thickness.

Constant Thickness



Because Figure 27 does not indicate a limb thickness to the left of the measurement within the leftmost 0.5 inch, a person of ordinary skill in the art would understand that the thickness to the left of the indicated thickness remains the same as the indicated thickness.

TenPoint Resp. Br., ECF No. 53, at 10. Parker takes a different view:

Figure 27 [] shows a partial vertical line corresponding to a length of 0.5 inches from the first end. There is no corresponding limb thickness shown either at the first end or at the distance of 0.5 inches from it. There are, moreover, no intermediate thickness measurements shown anywhere along this 0.5 inch length, except ".496 .486 WITH CAMO" which appears at an undisclosed distance between the first end and the 0.5 inch mark. There is no information found on Figure 27 from which it can be determined that there is any length of constant limb thickness between the first end and 0.5 inches from the first end.

To the contrary, examination of the totality of the drawing suggests by comparison that there is not a constant thickness at the first end, pictured at the left side of the drawing. [TenPoint] clearly demarcated a portion of constant thickness to the right of the hinge point (the nonworking area of the limb) by showing two identical measurements of .491 inches of thickness at approximately 0.5 inches

Parker Resp. Br., ECF No. 54, at 17. The court agrees with Parker.

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The left side, or first end side, of the drawings in both Figure 27 and Figure 6 is far less clear. The first inch of the bow limb depicted in Figure 6 contains no thickness measurements whatsoever. The measurements start at .478 at the one-inch mark and vary continuously to the hinge point. Figure 6 does not clearly portray an area of constant thickness at the first end.

Nor does Figure 27. Unlike in Figure 6, the first end side of the bow limb depicted in Figure 27 shows a thickness measurement of “.496 .486 WITH CAMO” prior to the measurement of .478 at the one-inch mark. TenPoint insists this figure shows one-half inch of constant thickness at the first end: “Because Figure 27 does not indicate a limb thickness to the left of the measurement within the leftmost 0.5 inch, a person of ordinary skill in the art would understand that the thickness to the left of the indicated thickness remains the same as the indicated thickness.” TenPoint Resp. Br., ECF No. 53, at 11. Whether this indeed shows an area of constant thickness is far from clear, however. There is no width measurement at the half-inch mark denoting an area of constant thickness. Neither of these figures supports TenPoint’s position.

The parties also both cite to a portion of the Provisional Application containing a transcript of an interview between TenPoint and patent counsel in which TenPoint discloses its limb design. While somewhat difficult to understand, this discussion appears to support Parker’s contention that the inventive feature of the patents-in-suit is a continuously varying limb thickness:

TENPOINT: Right. And I tried it in a couple different locations with a constant thickness limb and what we found is after we came back to this design with varying thickness, the original hinge location is near as I can tell the direct location and the fact that it is tapered all the way back to the butt allows this section back in here to also flex.

TDB: Now is that a typical limb design.

TENPOINT: Certainly you wouldn't start off designing a limb this way.

TDB: Why?

TENPOINT: Because of what I said when I tried to design the limb

as a traditional limb which had a solid butt end, a definite grind, the hinge and then back up to the tip.

TDB: So see there may be even something there?

TENPOINT: In other words, a traditional limb design I imagine a rectangle as your butt and then the backside is flat so that's the back side of the limb. And then you taper from here to the hinge and then back up to the axle. So from here to here it is tapered. That's the traditional design. On a limb or a compound limb, they will make the core shaped like this and then they will laminate layers on it. So this section is still square here.

TENPOINT: But in this design, the back of the limb is flat and has a square part here, tapers up to the hinge and then all the way back it is tapered. There is no rectangle back here. With a square butt end which is my second and third design with this hinge location in varying locations, all the while maintaining the squared butt end.

TENPOINT: And each time it failed. So we put our original one back on, which is a 14 1/2 inch cut down to 12 inch and tried it again just to make sure that we weren't missing something within the cam. So if you were to draw, this would have a square butt end.

...

TENPOINT: This hinge is 9.5 or 9.27, I forget the actual number, from this butt end before you cut it, and then when you cut it off it is 6 inches. So what I tried to do is make the hinge at 6 inches, but it didn't work.

TDB: Do you know why?

TENPOINT: Because this section through here, right outside of the pocket is too thick and the slope here doesn't cut the compression and the glass. These are all open fighters. You have fighters that are open if they are cut off. It is a big glass and there are thousands of glass spiders in there.

TDB: Okay

TENPOINT: And what would happen is these layers would lift off, in fact here is the butt right outside of the bucket. Right here. And by

making this section through here thinner, you are 30% thinner at the pocket now. So you are allowing the area behind the pocket.

TDB: Whereas when it is all square back there

TENPOINT: It doesn't bend. It is like trying to bend a 2x4 what basically will happen.

TENPOINT: If you look at every other limb in industry you have a square butt end tapered off.

TDB: Listen to what you just told me. Everyone else does it this way. Which you don't. It just reinforces all the more why this feature is inventive - because it is counter intuitive.

ECF No. 47-12, at 11-13, 14 (emphasis added). The Provisional Application lends support to Parker's position.

However, this issue turns on the court's interpretation of the claim term "bow limb(s)" in light of the specification. "While limitations contained in the specification are not ordinarily read into the claims," Watts v. XL Systems, Inc., 232 F.3d 877, 882 (Fed. Cir. 2000), case law teaches that "[c]laims must be read in view of the specification, of which they are a part." Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995); see Vitronics Corp. v. Conceptronic, 90 F.3d 1576, 1582 (Fed. Cir. 1996) ("Usually, [the specification] is dispositive; it is the single best guide to the meaning of a disputed term."); see also 35 U.S.C. § 112(a), (b) (stating one must look to the specification and claims to determine what the inventor regards as his invention). Indeed,

the distinction between using the specification to interpret the meaning of a claim and importing limitations from the specification into the claim can be a difficult one to apply in practice. See Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1186-87 (Fed. Cir. 1998) ("there is sometimes a fine line between reading a claim in light of the specification, and reading a limitation into the claim from the specification"). However, the line between construing terms and importing limitations can be discerned with reasonable certainty and predictability if the court's focus remains on understanding how a person of ordinary skill in the art would understand the claim terms.

Phillips v. AWH Corp., 415 F.3d 1303, 1323 (Fed. Cir. 2005).

The patents-in-suit are all titled Narrow Crossbow With Large Power Stroke and disclose various features and embodiments thereof. The background section of the patents' specification explains that large power strokes are desired in the industry but come at a cost. "One such problem is the added difficulty in manually cocking the crossbow. More specifically, the operator must have relatively long arms in order to properly reach the bowstring for cocking purposes." '541 Patent, col. 1, ll. 38-41. Known crossbows with large power strokes are also difficult to cock given the increased angle of the bowstring when placing it into the cocked position. Id. at col. 1, ll. 42-45. Another problem is that known crossbows must be "relatively wide" to achieve a large power stroke. Id. at col. 1, ll. 46-48.

Such wide crossbows may be difficult for a hunter to operate while following prey, side to side, because the crossbow is less maneuverable and the hunter is more likely to bump into surrounding objects.

What is needed is a relatively narrow crossbow having a relatively large power stroke. In this way, the disadvantages known in the art can be overcome in a way that is better, more efficient and that provides better overall results.

Id. at col. 1, ll. 47-55. The specification summarizes the invention "[a]ccording to one embodiment"⁴ as a crossbow with certain component parts and a wheel distance (WD)/power stroke distance (PD) ratio of less than 2.0; according to other embodiments a WD/PD ratio of less than 1.8 and 1.6, respectively; and "[a]ccording to yet another embodiment," a bow assembly including a first limb, the thickness of which "varies continuously along its length from its first end to its hinge point." See, e.g., '025 Patent, col. 1, ll. 60-67; col. 2, ll. 1-20. The summary section lists the advantages of the invention according to these embodiments as providing "a relatively narrow crossbow having a relatively large power stroke" that "may be easy to manually cock." Id. at col. 2,

⁴ This summary of the embodiments of the invention appears in the '012 Patent, '025 Patent, '595 Patent and '719 Patent but not the '541 Patent, which leaves the description of the embodiments blank. See '541 Patent, col. 1, ll. 59-62.

ll. 21-25.

The written description portion of the specification goes on to tout the advantages of limbs with continuously varying thicknesses, which the patentee notes are “believed to be a first in the industry.” ‘541 Patent, col. 4, ll. 28-29. Contrasting “known limbs,” which maintain a constant thickness for a portion “(2 to 4 inches, for a non-limiting example)” of the pocket engaging end, the specification indicates that the way to achieve a narrow crossbow with a large power stroke is through the continuously varying limb thickness:

Applicants have discovered [] that the use of a varied thickness at the first end limb provides unexpected advantages. Specifically, the varied thickness provides limbs that can withstand greater bending forces prior to failing under load and reduced vibrations.

Id. at col. 4, ll. 31-35. The specification goes on to describe Figure 6 of the patents-in-suit:

In one embodiment, shown in FIG. 6, the hinge point HP is at least 6 inches from the first end 60 of the limb 36. It should also be noted that the pockets 42 were not modified. Thus, it is clear that the varied thickness limbs provide the advantage.

Id. at col. 4, ll. 38-42.⁵ Notably, the specification explains this limb design is responsible for not only the reduced width of the crossbow, but also for the WD/PD ratios listed in the summary of the invention:

As a result, the limb length L1 can be shorter than previously thought possible. This also may contribute to the reduced ratio WD/PD described above.

Id. at col. 4, ll. 42-45. Thus, the “invention” in its various embodiments summarized in the specification is attributable to the continuously varying thickness of the bow limbs. See also ‘541 Patent, col. 5, ll. 13-16 (“It should be noted that these **inventive limb designs** are not only applicable to a crossbow but would also apply to a compound bow or other bows when applied with sound judgment by a person of ordinary skill in the art.” (emphasis added)). “A specification’s

⁵ This appears to dispel any notion that Figure 6 portrays an area of constant thickness at the first end.

emphasis on a particular feature of an invention in solving the problems of the prior art is an important factor in defining the claims.” Transcend Med., Inc. v. Glaukos Corp., No. CV 13-830, 2015 WL 263612, at *6 (D. Del. Jan. 16, 2015).

TenPoint insists that the specification makes clear that this limb design is but “one embodiment” of the invention. See ‘541 Patent, col. 4, ll. 16-17.

Whether an invention is fairly claimed more broadly than the “preferred embodiment” in the specification is a question specific to the content of the specification, the context in which the embodiment is described, the prosecution history, and if appropriate the prior art, for claims should be construed, when feasible, to sustain their validity. The usage “preferred” does not of itself broaden the claims beyond their support in the specification. See Modine Mfg. Co. v. United States Int’l Trade Comm’n, 75 F.3d 1545, 1551 (Fed. Cir. 1996); General American Transportation Corp. v. Cryo-Trans, Inc., 93 F.3d 766, 770, 772, 39 USPQ2d 1801, 1803, 1805-06 (Fed. Cir. 1996) (the teaching in the specification was “not just the preferred embodiment of the invention; it is the only one described”).

Wang Labs., Inc. v. Am. Online, Inc., 197 F.3d 1377, 1383 (Fed. Cir. 1999). To be sure, the patents-in-suit claim various limb embodiments relating to, for example, the length of the limbs, material of the limbs, and whether there are wheels attached to the limbs. But, as Parker points out, no other limb *thickness* embodiment or design is ever taught, illustrated or suggested.⁶ “Although claims need

⁶ TenPoint insists that some disclosed embodiments do include a constant-thickness portion at the first end of the limb. See TenPoint Resp. Br., ECF No. 53, at 10-11. It points to Figure 27 of the Provisional Application, which the court has already determined does not support TenPoint’s position, as well as to the transcript of the interview between TenPoint and patent counsel in the Provisional Application. TenPoint argues that one embodiment described in that interview discloses a limb length of 12 inches obtained by cutting off 2.5 inches from a prior 14.5 inch limb embodiment. It concludes, “[t]herefore, if a 14.5-inch limb were to be cut down by 2.5 inches, the resulting 12-inch limb would have either no constant-thickness portion or up to a 1.5-inch constant-thickness portion, depending on the size (2-4 inches) of the constant-thickness portion on the 14.5-inch limb.” *Id.* at 11. This, according to TenPoint, is a disclosed embodiment of a limb with an area of constant thickness.

This argument is far too speculative. As TenPoint recognizes, the limb described could have no constant-thickness portion remaining after the cut, depending on the length of constant thickness on the original 14.5-inch limb. TenPoint surmises that “up to a 1.5-inch constant-thickness portion” could have remained after the cut, but this is based on its assumption that the original limb had a 2 to 4 inch portion of constant thickness, which the specification notes to be “a non-limiting example” of areas of constant thickness on known limbs. See ‘541 Patent, col. 4, l. 30. The court simply has no idea what portion of the 14.5-inch limb described in this interview had a constant thickness prior to the cut and cannot therefore say this serves as an example of an embodiment with a disclosed constant thickness portion.

not be limited to the preferred embodiment when the invention is more broadly described, ‘neither do the claims enlarge what is patented beyond what the inventor has described as the invention.’”

Inpro II Licensing, S.A.R.L. v. T-Mobile USA, Inc., 450 F.3d 1350, 1355 (Fed. Cir. 2006) (quoting Netword, LLC v. Central Corp., 242 F.3d 1347, 1352 (Fed. Cir. 2001)).

Parker relies on SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337 (Fed. Cir. 2001), and a number of cases cited therein, in support of its position that the patents-in-suit disclaim known bow limbs with an area of constant thickness at the first end. The court in SciMed interpreted the asserted claims in light of the specification and upheld the district court’s construction of the patents as disclaiming the dual lumen configuration of the prior art in favor of the coaxial lumens claimed in the patented invention. TenPoint argues SciMed is distinguishable, because disclaimer in that case was clear and unequivocal. Indeed, the SciMed court held:

The words “all embodiments of the present invention” are broad and unequivocal. It is difficult to imagine how the patents could have been clearer in making the point that the coaxial lumen configuration was a necessary element of every variant of the claimed invention. Moreover, there is no suggestion that the patentee made that statement unaware of the alternative dual lumen configuration, because earlier in the patent the patentee had distinguished the dual lumen configuration used in prior art devices as having disadvantages that the coaxial lumens used in the patented invention had overcome. See ‘594 patent, col. 3, ll. 1–22; ‘482 patent, col. 3, ll. 3–24; ‘334 patent, col. 3, ll. 8–29. (describing the dual lumen configuration). This is therefore a clear case of disclaimer of subject matter that, absent the disclaimer, could have been considered to fall within the scope of the claim language.

Id. at 1343–44. To be sure, the standard for disavowal is “exacting.” Thorner v. Sony Computer Entertainment Am., LLC, 669 F.3d 1362, 1366 (Fed. Cir. 2012). However, the absence of words like “present invention” and “all embodiments” in the patents-in-suit is not dispositive of the instant dispute.

We have found disclaimer when the specification indicated that, for “successful manufacture,” a particular step was “require[d].”

Andersen Corp. v. Fiber Composites, LLC, 474 F.3d 1361, 1367 (Fed. Cir. 2007). We have found disclaimer when the specification indicated that the invention operated by “pushing (as opposed to pulling) forces,” and then characterized the “pushing forces” as “an important feature of the present invention.” SafeTCare Mfg., Inc. v. Tele-Made, Inc., 497 F.3d 1262, 1269–70 (Fed. Cir. 2007). We also have found disclaimer when the patent repeatedly disparaged an embodiment as “antiquated,” having “inherent inadequacies,” and then detailed the “deficiencies [that] make it difficult” to use. Chi. Bd. Options Exch., Inc. v. Int’l Sec. Exch., LLC, 677 F.3d 1361, 1372 (Fed. Cir. 2012). Likewise, we have used disclaimer to limit a claim element to a feature of the preferred embodiment when the specification described that feature as a “very important feature ... in an aspect of the present invention,” and disparaged alternatives to that feature. Inpro II Licensing, S.A.R.L. v. T-Mobile USA Inc., 450 F.3d 1350, 1354–55 (Fed. Cir. 2006). When a patentee “describes the features of the ‘present invention’ as a whole,” he alerts the reader that “this description limits the scope of the invention.” AGA Med. Corp., 717 F.3d at 936.

Pacing Technologies, LLC v. Garmin International, Inc., 778 F.3d 1021, 1024-25 (Fed. Cir. 2015).

The case of O.I. Corporation v. Tekmar Company, Inc., 115 F.3d 1576 (Fed. Cir. 1997), is instructive. The patents at issue in O.I. Corporation were directed to an apparatus and method for removing water vapor from a sample to be analyzed in gas chromatograph. The Federal Circuit was charged with reviewing the district court’s construction of the word “passage” not to include smooth-walled tubing. The specification in that case stated the structure for the passage included non-smooth geometries and a conical shape. The specification also distinguished prior art as “generally specif[ying] that the pneumatic tubing and passageways between the trap and GC are smooth-walled.” Id. at 1581. The court concluded that the term “passage” did not encompass a smooth-walled, completely cylindrical structure, finding “[a]ll of the ‘passage’ structures contemplated by the written description are [] either non-smooth or conical. In addition, the description expressly distinguishes over prior art passages by stating that those passages are generally smooth-walled. OI has not identified anything in the prosecution history contrary to those statements.” Id.; see also Inpro II Licensing, 450 F.3d at 1354-57 (holding district court “correctly

observed that the only host interface described in the specification is a direct parallel bus interface, and that the specification emphasizes the importance of a parallel connection in solving the problems of the previously used serial connection,” thus affirming interpretation of “host interface” to require “a direct parallel bus interface”).

The dispute in this case centers on one word: continuously. Although the patentee qualifies its description of bow limbs with continuously varying thickness as but “one embodiment,” no other thickness embodiment is taught or disclosed. The specification describes the limb design as “first in the industry,” and expressly touts the advantages of limbs with continuously varied thickness over the known limbs of prior art, which have a portion of constant thickness at the first end. In fact, the specification attributes this limb design to the shorter limb length and reduced ratio of WD/PD that are hallmarks of the invention.

Where the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent, even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question.

SciMed, 242 F.3d at 1341. Moreover, TenPoint has not identified anything in the prosecution history that suggests to the court that the term “bow limb(s)” should be construed broadly.

As such, the court concludes that one skilled in the art reading the claims in light of the specification, illustrations, and prosecution history would find that the term “bow limb(s)” in the context of the patents-in-suit means bow limb(s) having a continuously varying thickness from the first end to the hinge point. The court will construe these claim terms accordingly.

IV.

Four remaining claim terms require construction.⁷ As regards one of those claim terms, the

⁷ Any dispute over the six additional claim terms included in TenPoint’s opening brief, see ECF No. 48, at 13-17, was rendered moot by Parker’s withdrawal of non-infringement arguments as to these terms, which Parker confirmed on the

parties agree it contains a typographical error that should be corrected by the court. As to the other three, it is primarily the scope, rather than the meaning, of these terms that is in dispute. Both parties agree that the court should give these three terms their plain and ordinary meaning. Parker proposes no construction; TenPoint also argues no construction is required and proposes a construction in the alternative, only to the extent the court finds construction necessary.

The fact that a term may have a commonly understood meaning

does not relieve the Court of its duty to construe the claims. “A determination that a claim term ‘needs no construction’ or has [a] ‘plain and ordinary meaning’ may be inadequate when a term has more than one ‘ordinary’ meaning or when reliance on a term’s ‘ordinary’ meaning does not resolve the parties’ dispute.” O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co., 521 F.3d 1351, 1361 (Fed. Cir. 2008), reh’g en banc denied June 11, 2008.

Attic Tent, Inc. v. Copeland, 627 F. Supp. 2d 635, 640 (W.D.N.C. 2008). Thus, the court cannot simply adopt the plain and ordinary meaning of these terms without first resolving the parties’ dispute as to the scope of the claims at issue.

The purpose of claim construction is to “determin[e] the meaning and scope of the patent claims asserted to be infringed.” Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir.1995) (en banc), aff’d 517 U.S. 370, 116 S. Ct. 1384, 134 L. Ed. 2d 577 (1996). When the parties raise an actual dispute regarding the proper scope of these claims, the court, not the jury, must resolve that dispute. See id. at 979 (holding that claim construction is a matter of law).

O2 Micro, 521 F.3d at 1360.

The court addresses each of these claim terms below.

A. “the length of the first bow limb is between 11 and 12 inches; and, the length of the second bow limb is between 12 and 13 inches”

This limitation appears in the ‘595 Patent and contains a typographical error that both parties agree should be corrected by the court. Claim 4 of the ‘595 Patent reads:

4. The crossbow of claim 1 wherein:

record at the Markman hearing. As such, these claim terms require no construction by the court.

the length of the first bow limb is between 11 and 12 inches;
and,
the length of the second bow limb is between 12 and 13 inches.

The parties assert the court should correct the obvious typographical error in the description of the length of the second bow limb so that it reads: “the length of the second bow limb is between 11 and 12 inches.” As TenPoint points out on brief, the other claims of the ‘595 Patent describe a crossbow with two bow limbs of identical length. TenPoint Opening Br., ECF No. 48, at 37. For instance, Claim 1 describes a crossbow with two bow limbs, each having a length of “less than 14 inches.” ‘595 Patent, col. 9, ll. 12, 18. Claim 2 describes a crossbow with two bow limbs each “between 13 and 14 inches” in length, Claim 3 describes a crossbow wherein each of the two limbs has a length “between 12 and 13 inches,” and Claim 5 describes a crossbow with two limbs each having a length of “less than 11 inches.” ‘595 Patent, col. 9, ll. 59-62, 64-67; col. 10, ll. 7-8. Claim 4 is the only claim of the patent describing a crossbow with bow limbs of differing length.

Courts can correct obvious errors in patent claims but “only if (1) the correction is not subject to reasonable debate based on consideration of the claim language and the specification and (2) the prosecution history does not suggest a different interpretation of the claims.” Novo Indus., L.P. v. Micro Molds Corp., 350 F.3d 1348, 1357 (Fed. Cir. 2003); *see also* Group One Ltd. v. Hallmark Cards, Inc., 407 F.3d 1297, 1303 (Fed. Cir. 2005) (district court can correct an error if evident from face of patent). Here, the only reasonable interpretation of Claim 4 of the ‘595 Patent is the one agreed to by the parties. As such, the court will correct this typographical error as requested and construe this claim to read:⁸

4. The crossbow of claim 1 wherein:
the length of the first bow limb is between 11 and 12 inches;
and,
the length of the second bow limb is between 11 and 12 inches.

“This is not in any real sense, a re-making of the claim; but is merely giving to it the meaning which

⁸ The court’s construction of the term with respect the scope of the word “between” is discussed *infra*.

was intended by the applicant and understood by the examiner.” I.T.S. Rubber Co. v. Essex Rubber Co., 272 U.S. 429 (1926) (correcting “inadvertent and unnoticed” clerical error in claim).

B. “between” two numerical values

The patents-in-suit contain a number of claim limitations that quantify either the limb length or the power stroke (PD) as being “between” two numerical values—e.g., “the length of the first bow limb is between 13 and 14 inches,” ‘595 Patent, col. 9, ll. 59-60; “the crossbow of claim 1 wherein PD is between 10 inches and 11 inches,” ‘012 Patent, col. 8, ll. 39-40. Parker argues the plain and ordinary meaning of the term “between” excludes the beginning and end points:

The Merriam-Webster Online Dictionary provides an example which is telling: “The two days between Monday and Thursday are Tuesday and Wednesday.” [Merriam-Webster Online Dictionary, <http://www.merriam-webster.com/dictionary> (accessed Mar. 11, 2015)]. Common examples suffice as well: the even numbers between 0 and 10 are 2, 4, 6, and 8; if someone requests that you paint the area between the door frame and window frame, you would not paint the frames. Simply put, between two points means between those two points, not between two points and including those points as [TenPoint] suggests.

Parker Opening Br., ECF No. 47, at 31-32. TenPoint, on the other hand, contends that when used with numeric beginning and end points, the term “between” is inclusive. It cites AK Steel Corp. v. Sollac & Ugine, 344 F.3d 1234, 1241 (Fed. Cir. 2003), in support of this position. The court in AK Steel was charged with construing the term “up to about 10%.” The court held that the phrase included the “about 10% endpoint,” explaining:

As pointed out by AK Steel, when an object of the preposition “up to” is nonnumeric, the most natural meaning is to exclude the object (e.g., painting the wall up to the door). On the other hand, as pointed out by Sollac, when the object is a numerical limit, the normal meaning is to include that upper numerical limit (e.g., counting up to ten, seating capacity for up to seven passengers). Because we have here a numerical limit—“about 10%”—the ordinary meaning is that that endpoint is included.

Id.

Parker argues AK Steel is distinguishable because the claim term at issue in that case was “up to,” whereas here it is “between.” But the district court cases cited by TenPoint on brief suggest that distinction is of no moment. For example, In re Fenofibrate Patent Litigation, 910 F. Supp. 2d 708 (S.D.N.Y. 2012), aff’d, 499 F. App’x 974 (Fed. Cir. 2013), involved allegations of infringement related to the development of a generic version of the prescription drug ANTARA. The asserted claims required the ratio of fenofibrate to binding cellulose derivative in the final composition to be “between 5/1 and 15/1.” Id. at 711. Defendant’s generic ANDA Products contained a mass ratio of fenofibrate to binding cellulose derivative of no more than 4.7/1. Defendant thus argued that 4.7/1 was not “between” 5/1 and 15/1. The patentee, Lupin Atlantis Holdings S.A., disagreed, asserting 4.7/1 rounds to 5 and thus falls within the claimed range. The court held that 4.7/1 does not fall “between 5/1 and 15/1.” Of particular relevance to the instant case, the In re Fenofibrate court explained:

In this case, the “key word is ‘between,’” see Elekta Instrument S.A. v. O.U.R. Scientific Int’l, Inc., 214 F.3d 1302, 1307 (Fed. Cir. 2000), and, Lupin’s proposed definition of “between 5/1 and 15/1” does not comport with the ordinary meaning of that phrase. During claim construction, Lupin did not argue that the phrase “between 5/1 and 15/1” should be construed to embody anything other than its ordinary meaning. As the Federal Circuit concluded in Elekta, the ordinary meaning of “between” is “in the time, space or interval that separates.” Id. at 1308 (quoting Webster’s New World Dictionary 947 (3d ed. 1988)). The space or interval that separates 5 and 15 includes numbers greater than or equal to 5, and lesser than or equal to 15.

Id. at 712. The In re Fenofibrate court held the ordinary meaning of “between 5/1 and 15/1” includes the end values, 5 and 15. See also CoorsTek, Inc. v. Reiber, No. 08-cv-01133-KMT-CBS, 2011 WL 1638855, at *19 (D. Colo. May 2, 2011) (ordinary meaning of the phrase “from number ‘x’ to number ‘z’” would include the endpoint). Parker cites no case law to the contrary. Finding this reasoning persuasive, the court in the instant case will do the same.

Additionally, the specification supports a construction of “between” that is inclusive of the

endpoints. The '025 Patent describes one embodiment in which:

[T]he limb length L1 may be less than 15 inches. In a more specific embodiment, the limb length L1 may be less than 13 inches. In yet a more specific embodiment, shown in FIG. 6, the limb length L1 may be about 12 inches. In yet a more specific embodiment, the limb length L1 maybe about 11 inches

'025 Patent, col. 5, ll. 4-9. Given that the specification describes a crossbow with a limb length of "about 12 inches," it is inconceivable that the claims that disclose limb lengths "between 12 and 13 inches" and "between 11 and 12 inches," see, e.g., '025 Patent, col. 8, ll. 23-28, would exclude a 12 inch limb length.⁹ See also '595 Patent, col. 5, ll. 9-12; col. 9, ll. 64-66; col. 10, ll. 2-4 (using same description as above in specification and claiming crossbows with two limbs with lengths "between 12 and 13 inches," and "between 11 and 12 inches"). The same holds true for the '012 Patent, in which the specification describes a power stroke of "about 12 inches or greater," and the claims disclose a crossbow with a power stroke of "between 11 and 12 inches" and "between 12 and 13 inches." '012 Patent, col. 5, ll. 11-13; see, e.g., col. 8, ll. 41-44. It cannot be said that a crossbow with a power stroke of 12 inches is excluded from the scope of the claims.

The court holds that the scope of the term "between," when used to disclose a limb length or power stroke "between" two numerical values, includes the endpoints. Having resolved the parties' dispute, the court declines to engage in any further construction of the claim term. See Phillips v. AWH Corp., 415 F.3d 1303, 1314 (Fed. Cir. 2005) (construction of this claim term requires "little more than the application of the widely accepted meaning of commonly understood words"). The parties agree no construction is necessary, and the court will give the term its plain and ordinary meaning. See Finjan, Inc. v. Secure Computing Corp., 626 F.3d 1197, 1206-07 (Fed. Cir. 2010) (finding no O2 Micro error where court gave term its plain and ordinary meaning but

⁹ Indeed, Figure 6 of the patents-in-suit appears to depict a limb length of 12 inches.

explicitly rejected defendant's restrictive construction and prevented defendant's expert witness from advancing that construction at trial); see also Certusview Tech., LLC v. S & N Locating Servs., LLC, No. 2:13cv346, 2014 WL 2090550, at *11 (E.D. Va. May 16, 2014) (rejecting defendants' construction, adopting plain and ordinary meaning of term, and noting the court had resolved the parties' dispute).

C. "a foot stirrup mounted to said first end of said main beam"

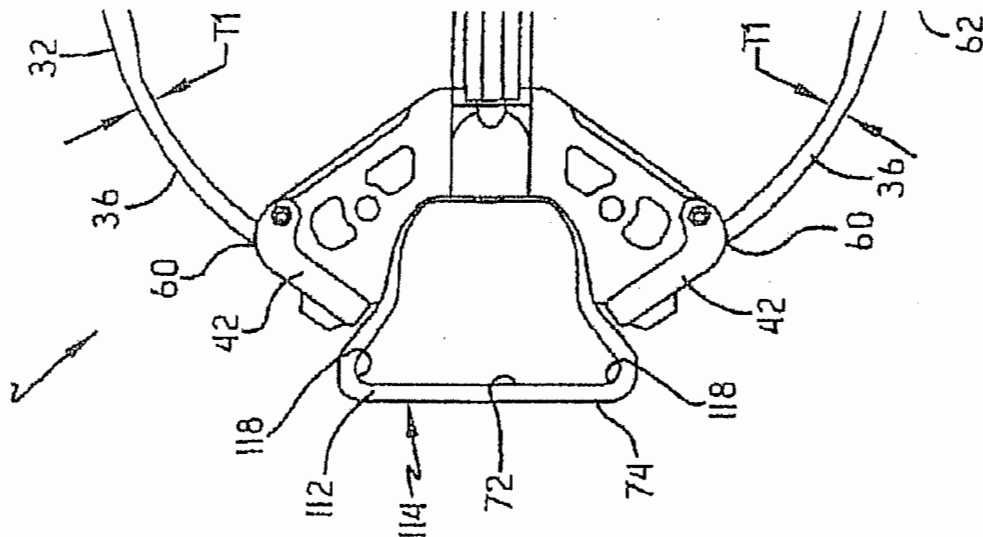
Claim 1 of the '719 Patent discloses a crossbow comprising, inter alia, "a foot stirrup mounted to said first end of said main beam" '719 Patent, col. 8, ll. 29. Both parties agree this claim term should be given its plain and ordinary meaning but dispute whether it requires the foot stirrup to be directly mounted to the main beam.

Parker argues that in the context of this patent, the term "mounted" requires a direct attachment. Parker points to Figure 3,¹⁰ which it claims depicts a foot stirrup directly abutting the main beam, as well as to the fact that the word "mounted" is used elsewhere in Claim 1 of the '719 Patent to describe a direct attachment—specifically, "a main beam having opposed longitudinal ends, including a first end to which is mounted said bow assembly." '719 Patent, col. 8, ll. 27-28. Parker contends the word cannot mean both a direct attachment and an indirect attachment within the same claim.

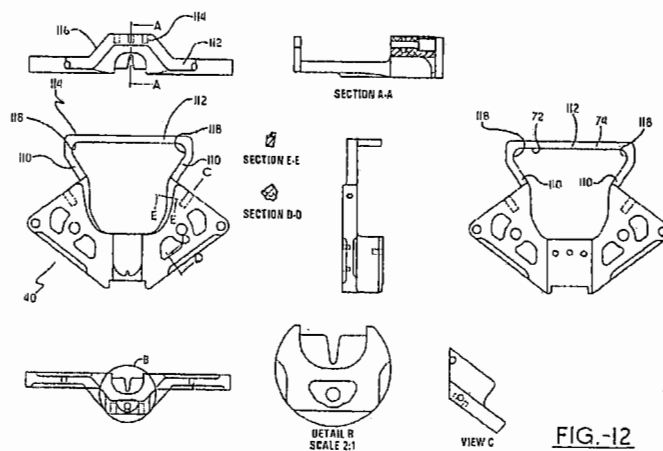
Parker is incorrect. Figure 3 does not show the foot stirrup directly abutting the main beam; it shows the foot stirrup mounted to the main beam through the riser:¹¹

¹⁰ Parker erroneously refers to this as Figure 4 on brief.

¹¹ This cropped and magnified version of the relevant portion of Figure 3 is found on page 34 of Parker's Opening Claim Construction Brief, ECF No. 47.



This is especially clear in light of Figure 12, which shows a detached foot stirrup and riser.



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No illustration in the '719 Patent shows the foot stirrup directly abutting the main beam. A claim construction that excludes a preferred embodiment "is rarely, if ever, correct." SanDisk Corp. v.

Memorex Prods., Inc., 415 F.3d 1278, 1285 (Fed. Cir. 2005) (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1583 (Fed. Cir. 1996)); see also Douglas Dynamics, LLC v. Buyers Prods. Co., 717 F.3d 1336, 1342-43 (Fed. Cir. 2013) (holding district court's construction requiring a direct connection would exclude a preferred embodiment of the invention, where Figure 6 depicted lift frame connected to mounting frame via an intermediate removable hitch arm).

Moreover, Claim 1 does not require a direct attachment of the bow assembly to the main beam, as Parker asserts. Claim 1 reads in full:

1. A crossbow comprising:

a bow assembly including a riser and a pair of bow limbs that are spaced- apart to allow a user's foot to be inserted therebetween;

a main beam having opposed longitudinal ends, including a first end to which is mounted said bow assembly; and

a foot stirrup mounted to said first end of said main beam; said foot stirrup beginning behind said pair of bow limbs and extending beyond said bow limbs, such that a user's foot is insertable into said foot stirrup to support the crossbow for cocking.

'719 Patent, col. 8, ll. 29-33. Claim 1 explicitly provides that the bow assembly includes a riser, id. at col. 8, l. 24, and the illustrations of the '719 Patent show the bow assembly, like the foot stirrup, mounted to the main beam by virtue of that riser. See, e.g., '719 Patent, Fig. 1, Fig. 3, Fig. 4, Fig. 7, Fig. 8, Fig. 12. Nothing in Claim 1 requires direct attachment of either the foot stirrup or the bow assembly to the main beam.¹²

In fact, the specification supports the notion that the foot stirrup can be attached to the main beam indirectly through the riser. It describes in relevant part:

With continued reference now to FIGS. 1-4 and 7-12, an opening 72 may be formed in the riser 40 and may define a foot stirrup 74 which

¹² Indeed, to credit Parker's argument that the word "mounted" used in Claim 1 requires direct attachment of both the foot stirrup and the bow assembly to the main beam, one would have to find a separate, direct attachment of both component parts to the main beam. This is plainly not what is illustrated in the patent figures and, as discussed infra, such a dual attachment makes no sense given this crossbow design.

is used, as is well known, in cocking the crossbow 10. . . . In one embodiment, the foot stirrup 74 comprises a generally U-shaped member *extending from the riser body*. . . .

'719 Patent, col. 6, ll. 7-24 (emphasis added). Additionally, as TenPoint points out, the word "mounted" is used elsewhere in the specification to denote an indirect attachment of the wheels to the bow limbs. See '719 Patent, col. 4, ll. 15-16 ("a pair of wheels or pulleys 38, 38 mounted to the limbs 36, 36 receive the bowstring"); col. 6, ll. 48-52 ("The wheel 38 may have first and second sides 82, 84 and an opening 86 . . . used to receive a shaft 88 that is operatively connected to the limbs 36 of the crossbow 10.")

There is no support in the patent language for Parker's contention that the foot stirrup must be directly mounted to the main beam. See Wonderland Nurserygoods Co., Ltd. v. Kids II, Inc., No. 1:13-CV-1114-TWT, 2014 WL 2094295, at *3 (N.D. Ga. May 20, 2014) (construing "mounted on" to mean "attached to," rather than "directly attached to," finding latter construction to be too restrictive where bassinet described in patent was mounted to frame body of play yard via a hook), denying reconsideration, 2014 WL 4071809 (N.D. Ga. Aug. 18, 2014); see also Douglas Dynamics, 717 F.3d at 1342 ("The '700 Patent does not at any point limit the connection between the A-frame and mounting frame to a 'direct' connection."). Therefore, the court declines to limit the claim scope to direct mounting. "The presumption is that claim terms should be given their 'ordinary and customary meaning,' Vitronics, 90 F.3d at 1582, and not a restrictive construction unless there is clear evidence to support it in the intrinsic evidence, or a broader meaning is specifically disclaimed during prosecution." Aventis Pharm. Inc. v. Amino Chemicals Ltd., 715 F.3d 1363, 1375 (Fed. Cir. 2013) (citing Saunders Grp., Inc. v. Comfortrac, Inc., 492 F.3d 1326, 1331 (Fed. Cir. 2007)); see also Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1117 (Fed. Cir. 2004) ("[C]laims will not be 'read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using "words or expressions of manifest exclusion or restriction."'" (citations

omitted)). To disclaim a broader meaning during prosecution, a patentee must make “a clear and unmistakable disavowal of scope during prosecution,” for example by “characteriz[ing] an aspect of his invention in a specific manner to overcome prior art.” Purdue Pharma L.P. v. Endo Pharmaceuticals Inc., 438 F.3d 1123, 1136 (Fed. Cir. 2006). There has been no such disavowal here, and the plain and ordinary meaning of “mounted” is not limited to a direct attachment.

Having rejected Parker’s restrictive reading of the limitation, the court finds this term needs no further construction. The court will give it its plain and ordinary meaning. See Finjan, 626 F.3d at 1206-07; see also Certusview Tech., 2014 WL 2090550, at *11.

D. “a riser that comprises: a connection portion that connects the riser to an end of the main beam”

At issue here is the term “a riser that comprises: a connection portion that connects the riser to an end of the main beam,” found in dependent Claims 15 and 30 of the ‘595 Patent:¹³

The crossbow of [independent Claims 1 and 16, respectively] further comprising a riser that comprises:

- a connection portion that connects the riser to an end of the main beam.
- a first end having a pocket that receives the first bow limb;
- and,
- a second end having a pocket that receives the second bow limb.

‘595 Patent, col. 10, ll. 49-46; col. 12, ll. 46-53. Parker argues that reading these dependent claims in conjunction with independent Claims 1 and 16 plainly reveals “that there is a dual connection of the (i) bow assembly mounted directly to the main beam, and (ii) a riser element connected directly to the main beam.” Parker’s Opening Br., ECF No. 47, at 35.

Independent Claims 1 and 16 disclose:

A crossbow comprising:

- a main beam that has a proximal end, a distal end and an axis

¹³ Although both parties, once again, agree this term should be given its plain and ordinary meaning, the scope of the term is plainly disputed. See O2 Micro, 521 F.3d at 1360.

of elongation;
a bow assembly mounted to the distal end of the main beam
and comprising:
[certain enumerated component parts, including a
bowstring, two bow limbs, and two wheels, as well as
the positioning of those component parts and certain
dimensions and capabilities]
a trigger mechanism mounted to the main beam for use in
holding the bowstring in the cocked position; and,
wherein the bow assembly has a draw weight in excess of 87
pounds.

'595 Patent, col. 8, ll. 63-67; col. 9, ll. 1-57; col. 10, ll. 57-67; col. 11, ll. 1-50. The fact that Claims 1 and 16 do not list the riser as part of the bow assembly leads Parker to argue that both the bow assembly and the riser must be separately, directly attached to the main beam. The court rejects this argument.

The fact that the riser is not listed as part of the bow assembly in Claims 1 and 16 does not mean it was mean to be *excluded*. Claims 1 and 16 describe "[a] crossbow comprising: . . . a bow assembly mounted to the distal end of the main beam and comprising" certain component parts. "Comprising" is an inclusive, rather than exclusive, term, and the specification suggests that a bow assembly can include a riser. The summary of the invention section of the specification states: "According to yet another embodiment of this invention, a bow assembly includes: a riser having a first end with a first pocket and a second end with a second pocket" '595 Patent, col. 2, ll. 13-15. The specification later details this described embodiment:

The crossbow 10 also includes a bow assembly 30 adapted to propel an arrow and having a bow 32 and a bowstring 34. The bow 32 includes a pair of limbs 36, 36 that receive the bowstring 34 in any conventional manner chosen with sound judgment by a person of ordinary skill in the art. For the embodiment shown, a pair of wheels or pulleys 38, 38 mounted to the limbs 36, 36 receive the bowstring 34 in a known manner. The bow may also include a riser or block 40 having a pair of limb pockets 42, 42 that receive the limbs 36, 36, as shown.

'595 Patent, col. 4, ll. 12-21. Indeed, Claim 1 of the '719 Patent specifically lists the riser as part of

the bow assembly. '719 Patent, col. 8, ll. 24 (claiming "a bow assembly including a riser").

Whether or not the riser is considered part of the bow assembly, Parker's argument still fails. As with the disputed foot stirrup term discussed supra, Parker reads the word "directly" into the claims language when there is no basis for doing so. Claims 1 and 16 do not require a direct attachment of the bow assembly to the main beam. As previously discussed, the patent illustrations all show the bow assembly mounted to the main beam indirectly through the riser. See '595 Patent, Fig. 1, 3, 4, 5, 7, 8, 10. None of these illustrations show separate, direct attachments of the bow assembly and the riser to the main beam. Likewise, nothing about crossbow design suggests such a dual attachment would even be possible. As such, the court declines to find that the claims of the '595 Patent require independent, direct attachments of the riser and bow assembly to the main beam.

Having clarified the scope of the claim, the court finds no need to construe this claim further. Thus, the court will give the disputed term its plain and ordinary meaning. See Finjan, 626 F.3d at 1206-07; see also Certusview Tech., 2014 WL 2090550, at *11.

V.

The dispute over the next series of claim terms centers on indefiniteness.¹⁴ Indefiniteness is

¹⁴ On brief, TenPoint moves to strike Parker's indefiniteness allegations, arguing Parker failed to adequately explain its arguments in its invalidity contentions and answers to TenPoint's interrogatories. See TenPoint's Opening Br., ECF No. 48, at 44. TenPoint contends it was hamstrung by this lack of explanation, which rendered it impossible to adequately prepare a defense. Parker insists that it has complied with its disclosure obligations.

The amended scheduling order required Parker to serve on TenPoint its Preliminary Invalidity and Unenforceability Contentions, which were to include "[a]ny grounds of invalidity based on 35 U.S.C. § 112, including invalidity contentions based on written description, enablement, and/or indefiniteness and/or best mode." ECF No. 26, at 6 ¶ 18(d). In its contentions, Parker listed each claim limitation it alleges to be indefinite, as well as the specific claims of the specific patents in which these limitations can be found, along with the applicable legal standard.

TenPoint's interrogatory number 10 asked Parker to "[s]tate with specificity the factual and legal basis, including an element-by-element analysis for each claim of each of Defendant's Patents, upon which you allege that Defendant's Patents are invalid. . . ." ECF No. 48-15, at 8. Parker provided a detailed response to this interrogatory, ECF No. 48-16, at 7-12, but objected to TenPoint's request for a claim-by-claim analysis in advance of the deadline for filing invalidity and infringement contentions.

a “legal determination arising out of the court’s performance of its duty construing the claims.” B.J. Servs. Co. v. Halliburton Energy Servs., Inc., 338 F.3d 1368, 1372 (Fed. Cir. 2003). The Patent Act requires that a patent’s specification “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.” 35 U.S.C. § 112(b).¹⁵

Because the claims perform the fundamental function of delineating the scope of the invention, Chimie v. PPG Indus., Inc., 402 F.3d 1371, 1379 (Fed. Cir. 2005), the purpose of the definiteness requirement is to ensure that the claims delineate the scope of the invention using language that adequately notifies the public of the patentee’s right to exclude, Honeywell Int’l, Inc. v. Int’l Trade Comm’n, 341 F.3d 1332, 1338 (Fed. Cir. 2003).

Datamize, LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1347 (Fed. Cir. 2005), abrogated on other grounds by Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120 (2014).

The United States Supreme Court recently articulated the standard for indefiniteness under § 112 in Nautilus, Inc. v. Biosig Instruments, Inc., ____ U.S. ____, 134 S. Ct. 2120 (2014). The Court held: “[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” Id. at 2124. The Court explained that § 112 “entails a ‘delicate balance.’” Id. at 2128 (quoting Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 731, 122 S. Ct. 1831 (2002)). “On the one hand, the definiteness requirement must take into account the inherent limitations of language” and must allow for “[s]ome modicum of uncertainty”

To the court’s knowledge, TenPoint never moved to compel or otherwise sought court intervention in an effort to gain a more detailed understanding of Parker’s indefiniteness allegations prior to the filing of its claim construction brief. In any event, the indefiniteness issue has been thoroughly briefed by both parties, and it does not appear to the court that any failure on Parker’s part to provide a detailed explanation of its argument before filing its opening brief has prejudiced TenPoint with respect to its defense of this case. As such, TenPoint’s motion to strike is **DENIED**.

¹⁵ This statute was amended by the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284, which went into effect on September 6, 2011. Paragraph 2 of § 112 was replaced with § 112(b). Because the patents-in-suit issued after 2011, the court will reference § 112(b) but notes the language in the prior version of the statute is substantially similar.

to incentivize innovation. Id. “At the same time, a patent must be precise enough to afford clear notice of what is claimed, thereby ‘appris[ing] the public of what is still open to them.’” Id. at 2129 (quoting Markman, 517 U.S. at 373 (internal citations omitted)). “Although absolute or mathematical precision is not required,” Interval Licensing LLC v. AOL, Inc., 766 F.3d 1364, 1370-71 (Fed. Cir. 2014), cert. denied, 136 S. Ct. 59 (2015), “a patent does not satisfy the definiteness requirement of § 112 merely because ‘a court can ascribe some meaning to a patent’s claims.’” Id. (quoting Nautilus, 134 S. Ct. at 2130). The statute requires “that a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” Nautilus, 134 S. Ct. 2129; accord Interval Licensing, 766 F.3d at 1371.

“Indefiniteness is a matter of claim construction, and the same principles that generally govern claim construction are applicable to determining whether allegedly indefinite claim language is subject to construction.” Praxair, Inc. v. ATMI, Inc., 543 F.3d 1306, 1319 (Fed. Cir. 2008) (citing Datamize, LLC, 417 F.3d at 1348). Issued patents are presumed valid, 35 U.S.C. § 282, and the party challenging the validity has the burden of proving invalidity by clear and convincing evidence. Microsoft Corp. v. i4i Ltd. P’ship, 564 U.S. 91, 131 S. Ct. 2238, 2242 (2011).

Neither party has offered proposed constructions for the disputed claim terms. Thus, the sole issue to be decided with respect to each of the following limitations is whether Parker has met its burden of proving the claims are invalid as indefinite.

A. “Properly propelled” limitations of the ‘595 Patent

Parker asserts that the following limitations, highlighted in bold and appearing in independent Claims 1 and 16 of the ‘595 Patent, are indefinite:

- (a) a first wheel that is supported to the first bow limb and that is pivotal with respect to the first bow limb about **a first pivot axis that is substantially perpendicular to a ground surface when the arrow is properly propelled, wherein a first line that is**

substantially parallel to the first pivot axis simultaneously intersects a portion of the first wheel and a portion of the first bow limb;

- (b) **a second wheel that is supported to the second bow limb and that is pivotal with respect to the second bow limb about a second pivot axis that is substantially perpendicular to the ground surface when the arrow is properly propelled, wherein a second line that is substantially parallel to the second pivot axis simultaneously intersects a portion of the second wheel and a portion of the second bow limb;**

'595 Patent, col. 9, ll. 19-34; col. 11, ll. 13-28. Parker insists that the lack of precision in the terms "substantially perpendicular" and "substantially parallel," as well as the inherent subjectiveness of these terms of degree, render these claims, and all those dependent on them, indefinite. Parker argues the meaning of these terms would not be reasonably certain to one skilled in the art, and there is no context in the specification from which one could discern the proper definition. The court disagrees.

Terms of degree are not inherently indefinite. See Interval Licensing, 766 F.3d at 1370 ("We do not understand the Supreme Court to have implied in Nautilus, and we do not hold today, that terms of degree are inherently indefinite.").

[I]t is well accepted that "patentable inventions cannot always be described in terms of exact measurements, symbols and formulae, and the applicant necessarily must use the meager tools provided by language, tools which admittedly lack exactitude and precision." Georgia-Pacific Corp. v. United States Plywood Corp., 258 F.2d 124, 136 (2d Cir. 1958), cert denied, 358 U.S. 884 (1958). Therefore, "[e]xpressions such as 'substantially' are used in patent documents when warranted by the nature of the invention, in order to accommodate the minor variations that may be appropriate to secure the invention . . . and indeed may be necessary in order to provide the inventor with the benefit of his invention." Verve, LLC v. Crane Cams, Inc., 311 F.3d 1116, 1120 (Fed. Cir. 2002). That said, the Court understands that "[w]hen a word of degree is used the district court must determine whether the patent's specification provides some standard for measuring that degree." Seattle Box Co., Inc. v. Indus. Crating & Packing, Inc., 731 F.2d 818, 826 (Fed. Cir. 1984).

Thomas Swan & Co., Ltd. v. Finisar Corp., No. 2:13-cv-00178, 2014 WL 2885296, at *25 (E.D. Tex.

June 25, 2014); see also id. (noting that the Supreme Court's decision in Nautilus does not overturn the above-cited cases but rather emphasizes that "the definiteness inquiry does not require 'absolute precision'").

Here, the patentee plainly used the word "substantially" to describe the relationship between two lines—i.e., their perpendicularity or parallelity, as the case may be—in a way that does not require exactness. See Ecolab, Inc. v. Envirochem, Inc., 264 F.3d 1358, 1367 (Fed. Cir. 2001) ("[T]he term 'substantially' is a descriptive term commonly used in patent claims to 'avoid a strict numerical boundary to the specified parameter.'"). The phrase "substantially perpendicular" "envisions some amount of deviation from [perpendicular]." Anchor Wall Sys., Inc. v. Rockwood Retaining Walls, Inc., 340 F.3d 1298, 1311 (Fed. Cir. 2003). Had the adverb "substantially" not been included in the claims language, one could argue that the limitation demands a precise 90 degree angle between the pivot axis and ground surface when the crossbow is used to propel an arrow. Such exactitude is impractical; even the slightest variation in a crossbow's orientation to the ground when used to propel an arrow would alter the angle and make the limitation a near impossibility.

Parker likens this case to Datamize, LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1350-52 (Fed. Cir. 2005). In Datamize, the court held use of the term "aesthetically pleasing" rendered the claim indefinite in the context of a patent that disclosed software allowing a person to author user interfaces for electronic kiosks. The court reasoned that the claim language did not provide any meaningful definition of "aesthetically pleasing" and that Datamize offered no objective definition or standard for determining whether an interface screen is "aesthetically pleasing." The court stated, "[i]n the absence of a workable objective standard, 'aesthetically pleasing' does not just include a subjective element, it is completely dependent on a person's subjective opinion." Id. at 1350. The same cannot be said in the instant case. The terms "substantially perpendicular" and "substantially parallel" are not "completely dependent on a person's subjective opinion." Id. The Datamize court,

in fact, recognized this distinction, noting “‘aesthetically pleasing’ does not exactly compare to words of degree such as ‘substantially equal to,’ see Seattle Box Co., 731 F.2d at 826, ‘about,’ see BJ Servs. Co. v. Halliburton Energy Servs., Inc., 338 F.3d 1368, 1372–73 (Fed. Cir. 2003), or ‘substantial absence,’ see Exxon Research & Eng’g, 265 F.3d at 1380–81.” 417 F.3d at 1351.

Unlike in Datamize, the relevant claim language of the ‘595 Patent, when read in light of Figures 1, 2 and 4 and their descriptions in the specification, provide objective boundaries for those skilled in the art. The specification explains:

FIG. 1 shows the crossbow **10** in an uncocked condition while FIGS. 2-4 show the crossbow **10** in a cocked condition. The power stroke is thus shown, in FIG. 1, with reference PD. For this invention the power stroke PD is at least 10 inches. In a more specific embodiment the power stroke PD is at least 12 inches. In yet a more specific embodiment the power stroke PD is about 13 inches. With reference to FIGS. 2 and 4, each wheel 38, 38 pivots about a pivot axis A-A. When the crossbow **10** is in the uncocked condition, the distance between the two pivot axes is shown with reference WD, see FIG. 1. To illustrate the relative narrow design of the crossbow according to this invention, in one embodiment the ratio WD/PD is less than 2.0. In a more specific embodiment the ratio WD/PD is less than 1.8. In getting more specific embodiments the ratio WD/PD is less than 1.6.

‘595 Patent, col. 4, ll. 30-44. Figure 2 shows a line depicting the pivot axis, marked A-A, running perpendicular to the ground:

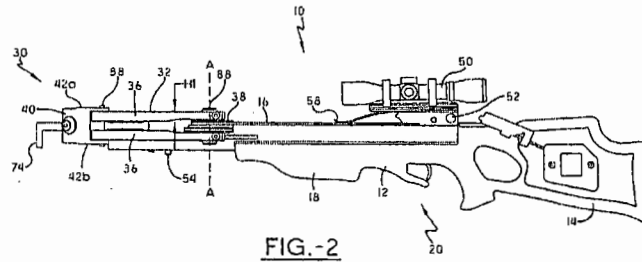


FIG. -2

See also '595 Patent, Fig. 18.

The patentee's use of the word "substantially" is not fatal to these claims. Cf. Enzo Biochem, Inc. v. Applera Corp., 599 F.3d 1325, 1335 (Fed. Cir. 2010) (holding claims not indefinite even though the construction of the term "not interfering substantially" defined term without reference to precise numerical measurement). Nautilus does not require an exacting standard, so long as the claims inform one skilled in the art about the scope of the invention with reasonable certainty. 134 S. Ct. at 2129 (holding "a patent must be precise enough to afford clear notice of what is claimed, thereby 'appris[ing] the public of what is still open to them'" but recognizing that "absolute precision is unattainable").

Subjective terminology aside, Parker contends it would be impossible to evaluate any crossbow against a claim that refers to the propulsion of an arrow at a specific angle to the ground,

because “in ordinary usage a crossbow may fire at many different angles with respect to the ground.” Parker’s Opening Br., ECF No. 47, at 39. Parker further argues the patent provides no clarification for what a “properly propelled” arrow is. Parker is feigning confusion. A skilled artisan would know how to hold and use a crossbow to propel an arrow¹⁶ and, thus, would understand the orientation of the wheels on a bow assembly, described in Claims 1 and 16 of the ‘595 Patent.¹⁷ The illustrations in Figures 2, 4 and 18 of the ‘595 Patent leave no doubt as to what is meant by these disputed claims. These figures show a crossbow oriented parallel to the ground with a dashed line marked “A - A,” which is defined in the specification as the pivot axis, running through the wheel shaft perpendicular to the ground. See ‘595 Patent, col. 4, ll. 36-37. The term “properly propelled” cannot be divorced from the remainder of the claims language and must be read in the context of the entire patent, including the illustrations. See Abbott Labs. v. Syntro Bioreserch, Inc., 334 F.3d 1343, 1351 (Fed. Cir. 2003) (“The usage of the disputed claim terms in the context of the claims as a whole also informs the proper construction of the terms.”). It plainly appears in the ‘595 Patent as a way to describe the orientation of the wheel axes, not to suggest there is only one way to propel an arrow.¹⁸ A skilled artisan reading these claims in full context would understand, with reasonable certainty, what is claimed here. Thus, the court finds that Parker has not met its burden of establishing the “properly propelled” limitations of the ‘595 Patent are indefinite.

B. Dimensional limitations

1. “elongated main beam,” “elongated bow limbs” and “axis of elongation”

Parker argues that the term “elongated,” used to describe the main beam in Claims 1 and 27

¹⁶ Indeed, the specification lists the components of a crossbow and then states: “As the operation of these components is well known to those of skill in the art, no further details will be provided.” ‘595 Patent, col. 4, ll. 27-29.

¹⁷ Parker argues that when used from a tree stand, a crossbow can be aimed “straight down towards a buck below,” which would orient the wheels’ pivot axes perfectly parallel to the ground rather than perpendicular. Parker’s Opening Br., ECF No. 47, at 46. The fact that a crossbow might be used from a tree stand and might be aimed downward does not render this claim indefinite. Claims 1 and 16 of the ‘595 Patent inform one skilled in the art about the scope of the invention with reasonable certainty. Nautilus, 134 S. Ct. at 2129.

¹⁸ Thus, unlike in Datamize, the term is not “completely dependent on a person’s subjective opinion.” 417 F.3d at 1350.

of the '012 Patent and Claim 3 of the '719 Patent, and to describe bow limbs in Claim 3 of the '719 Patent, is indefinite. Parker contends the patents-in-suit refer elsewhere to the main beam and bow limbs without the "elongated" modifier; thus, there must be a distinction between an "elongated main beam" or "elongated bow limbs" and un-elongated ones. Parker raises a similar argument concerning the term "axis of elongation," used in Claims 1 and 16 of the '595 Patent, Claim 1 and 27 of the '012 Patent and, (as TenPoint points out) Claim 1 of the '541 Patent.

These terms are not indefinite. The word "elongated" is commonly understood to mean long and thin and is used to describe something longer than its width.¹⁹ See Protective Indus., Inc. v. Ratermann Mfg., Inc., No. 3:10-cv-01033, 2012 WL 1598042, at *6 (M.D. Tenn. May 7, 2012) ("[T]he Court finds that the term 'elongated' is clear and that, if any definition is needed, the term is to be defined as 'longer than it is wide.'"). Simply looking at the illustration on the cover page of the patents-in-suit would make clear to one skilled in the art what is meant by the terms "elongated main beam" and "elongated bow limbs."

Moreover, the fact that the word "elongated" is used descriptively in certain claims but not others does not mean the terms in which it appears must be interpreted differently. Parker's claim differentiation argument is unconvincing. "In the most specific sense, 'claim differentiation' refers to the presumption that an independent claim should not be construed as requiring a limitation added by a dependent claim. Thus, the claim differentiation tool works best in the relationship between independent and dependent claims." Curtiss-Wright Flow Control Corp. v. Velan, Inc., 438 F.3d 1374, 1380 (Fed. Cir. 2006) (internal citations omitted).

We are not faced with a situation here in which the main beam is described without the modifier in an independent claim but with the modifier in a dependent claim of the same patent, in

¹⁹ The court notes that the patents define the main beam using a similar adjective, "longitudinal." See, e.g., '012 Patent, col. 3, ll. 35-37 ("Main Beam" means the longitudinal structural member of a weapon used to support the trigger mechanism and often other components as well.").

which case Parker's argument might have fared better. Rather, the word "elongated" is used in independent Claims 1 and 27 of the '012 Patent and independent Claim 3 of the '719 Patent, but not in the independent claims of other patents-in-suit—e.g., Claim 1 of the '541 Patent.

Beyond the independent/dependent claim scenario, this court has characterized claim differentiation more generally, i.e., as the "presumption that each claim in a patent has a different scope." Versa Corp. v. Ag-Bag Int'l Ltd., 392 F.3d 1325, 1330 (Fed. Cir. 2004) (quoting Comark Commc'ns, Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed. Cir. 1998)). Different claims with different words can, of course, define different subject matter within the ambit of the invention. On the other hand, claim drafters can also use different terms to define the exact same subject matter. Indeed this court has acknowledged that two claims with different terminology can define the exact same subject matter. Tandon Corp. v. U.S. Int'l Trade Comm'n, 831 F.2d 1017, 1023 (Fed. Cir. 1987); Hormone Research Found. v. Genentech, Inc., 904 F.2d 1558, 1567 n. 15 (Fed. Cir. 1990) ("It is not unusual that separate claims may define the invention using different terminology, especially where (as here) independent claims are involved."). In this context, this court has cautioned that "[c]laim differentiation is a guide, not a rigid rule." Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1538 (Fed. Cir. 1991).

Id. at 1380-81.

In the context of the instant patents-in-suit, the court finds that the term "elongated main beam" means the same thing as "main beam" and that "elongated bow limbs" means the same thing as "bow limbs." See Tate Access Floors, Inc. v. Maxcess Tech., Inc., 222 F.3d 958, 968 (Fed. Cir. 2000) ("[D]espite the absence of the modifier 'integral,' the term 'border' in claim 8 should be construed in the same manner as the term 'integral contrasting border' in claim 1."). There is no suggestion in any of the patents that an un-elongated main beam or un-elongated bow limbs are claimed; indeed, the illustrations consistently depict a long, thin main beam and long, thin bow limbs. Moreover, other claim terms and limitations differentiate the claims at issue from claims in the remaining patents-in-suit. "[T]hat the claims are presumed to differ in scope does not mean that every limitation must be distinguished from its counterpart in another claim, but only that at least

one limitation must differ.” *Id.* at 968; Fujitsu Ltd. v. Tellabs Operations, Inc., No. 08 C3379, 09 C 4530, 2012 WL 987272, at *6 (N.D. Ill. Mar. 21, 2012) (“When each claim in a patent has a different scope regardless of whether two similar claim terms are construed to be identical, there is much less reason to apply the doctrine of claim differentiation.”).

Additionally, the meaning of “axis of elongation” is abundantly clear in light of the patentee’s descriptive use of the word “elongated.” Both terms appear in Claims 1 and 27 of the ‘012 Patent, which disclose:

A crossbow comprising:
an **elongated** main beam
a bow assembly mounted to the main beam and comprising:
(a) a pair of bow limbs, defining opposite ends of said bow assembly,
each bow limb having a length;
(b) a bowstring movable between a cocked position and an uncocked
position, the linear distance between the cocked position and the
uncocked position along **the axis of elongation** of the main beam
being the power-stroke distance (PD), said PD being at least 10
inches

‘012 Patent, col. 8, ll. 12-22. Figure 1 illustrates what is described in these claims using a double arrowed line labeled “PD” that runs along the length of the main beam, the axis of elongation:

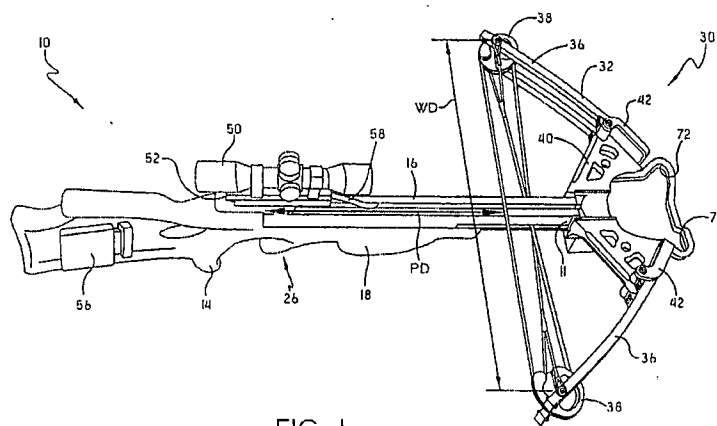


FIG. 1

Moreover, Claims 1 and 16 of the '595 Patent describe the main beam as having three parts: "a proximal end, a distal end and **an axis of elongation**." '595 Patent, col. 8, ll. 64-65; col. 10, ll. 58-59.

The meaning of "axis of elongation" and "elongated" in the context of these patents is clear, and the scope of these claims would be reasonably certain to those skilled in the art. As such, the court rejects Parker's contention that these disputed claims are indefinite.

2. *"approximately 13 inches"*

Parker argues that the term "approximately 13 inches," which appears in multiple claims of

the '012 Patent²⁰ to describe power stroke (PD),²¹ is indefinite because it contains an undefined term of degree. Other claims of the '012 Patent list a set range for power stroke. See, e.g., '012 Patent, col. 8, ll. 39-40 ("The crossbow of claim 1 wherein PD is between 10 inches and 11 inches."). The claims at issue, however, quantify power stroke as "approximately 13 inches." Parker contends the specification provides no guidance as to how to evaluate a power stroke of "approximately 13 inches," and, thus, a manufacturer would not be able to tell if a product were infringing.

For its part, TenPoint relies primarily on two cases, Thomas Swan & Co., Ltd. v. Finisar Corp., No. 2:13-cv-00178, 2014 WL 2885296 (E.D. Tex. June 25, 2014), and Advanced Steel Recovery, LLC v. X-Body Equipment, Inc., No. 2:12-cv-01004-GEB-DAD, 2013 WL 4828152 (E.D. Cal. Sept. 9, 2013). In both cases, the court found the term "approximately" not to be indefinite.

Words of approximation are "ubiquitous in patent claims" and, "when serving reasonably to describe the claimed subject matter to those of skill in the field of the invention, and to distinguish the claimed subject matter from the prior art, have been accepted in patent examination and upheld by the courts." Andrew Corp. v. Gabriel Elecs., Inc., 847 F.2d 819, 821 (Fed. Cir. 1988) (holding terms "approach each other," "close to," "substantially equal," and "closely approximate" not to be indefinite). "Approximately" is synonymous with "about." See, e.g., '012 Patent, col. 4, ll. 32-33 (describing in specification a specific embodiment in which "power stroke PD is about 13 inches"). The Federal Circuit has held that the term "about," like the term "substantially," "is a descriptive term commonly used in patent claims to 'avoid a strict numerical boundary to the specified

²⁰ Dependent claims 6, 12, 18, 25, 32, 38, 44, 51. The court notes that other claims of the '012 Patent also use the word "approximately" with respect to the power stroke measurement—e.g., "The crossbow of claim 1 wherein PD is approximately 10 inches," '012 Patent, col. 8, ll. 37-38—but Parker does not challenge the definiteness of these claims. Parker points out that the disputed claim is of particular relevance in this case because TenPoint's infringement contentions include a Parker crossbow with a power stroke of 13.25 inches. Whether this crossbow infringes the patents-in-suit, however, is a question to be answered at a later stage of the proceedings.

²¹ Power stroke is defined in the '012 Patent as "the linear distance that the bowstring is moved between the uncocked condition and the cocked condition." '012 Patent, col. 3, ll. 42-44.

parameter.” Ecolab, Inc. v. Envirochem, Inc., 264 F.3d 1358, 1367 (Fed. Cir. 2001) (quoting Pall Corp. v. Micron Seps., 66 F.3d 1211, 1217 (Fed. Cir. 1995)); see also Anchor Wall Sys., Inc. v. Rockwood Retaining Walls, Inc., 340 F.3d 1298, 1310-11 (Fed. Cir. 2003).

The Supreme Court’s decision in Nautilus does not demand a strict numerical boundary, as the district court in Thomas Swan recognized. “To the contrary, the Supreme Court emphasized that the definiteness inquiry does not require ‘absolute precision’ because, for example, the statute ‘must take into account the inherent limitations of language’ and ‘[s]ome modicum of uncertainty . . . is the price of ensuing appropriate incentives for innovation.’” 2014 WL 2885296, at *25. The Thomas Swan court considered whether the limitations “approximately a desired center wavelength of a respective channel” and “approximately a desired passband of a respective channel” are indefinite and concluded they are not. The court found that in the context of the respective patent, the specification informed, with reasonable certainty, those skilled in the art about the scope of the claim terms.

In this case, the word “approximately” refers to a numerical value for power stroke distance. Independent Claims 1 and 27 of the ‘012 Patent, on which the disputed claims rely, describe how power stroke is measured:

(b) a bowstring movable between a cocked position and an uncocked position, the linear distance between the cocked position and the uncocked position along the axis of elongation of the main beam being the power-stroke distance (PD), said PD being at least 10 inches. . . .

‘012 Patent, col. 8, ll. 18-24. The specification defines power stroke as “the linear distance that the bowstring is moved between the uncocked condition and the cocked condition.” ‘012 Patent, col. 3, ll. 42-44; see also col. 1, ll. 32-34 (“The power stroke is the distance along the main beam that the bowstring moves between the uncocked and the cocked condition.”). It goes on to explain:

FIG. 1 shows the crossbow 10 in an uncocked condition while FIGS. 2-4 show the crossbow 10 in a cocked condition. The power stroke

is thus shown, in FIG. 1, with reference PD. For this invention the power stroke PD is at least 10 inches. In a more specific embodiment the power stroke PD is at least 12 inches. In yet a more specific embodiment the power stroke PD is about 13 inches.

'012 Patent, col. 4, ll. 27-33.

The court finds that in the context of this patent, the disputed claims, disclosing a measurement of "approximately 13 inches," provide sufficient objective boundaries. See Interval Licensing, 766 F.3d at 1371; cf. In re Fenofibrate Patent Litig., 910 F. Supp. 2d 708, 713 (S.D.N.Y. 2012), aff'd, 499 F. App'x 974 (Fed. Cir. 2013) (rejecting argument that ratio 4.7/1 falls within the range "between 5/1 and 15/1," and noting the claim limitations "do not include any approximation language such as 'about' or 'approximately' that would indicate that the ratios should be read broadly"). The term "approximately" is not inherently indefinite, id. at 1370, and Parker has not established by clear and convincing evidence that as used in the '012 Patent, it fails to inform, with reasonable certainty, those skilled in the art about the scope of the invention.

3. *"a second end that extends from a first side of the main beam toward the proximal end of the main beam" and "a second end that extends from a second side of the main beam toward the proximal end of the main beam"*

The terms "a second end that extends from a first side [or second side, respectively] of the main beam toward the proximal end of the main beam" appear in Claims 1 and 16 of the '595 Patent in the following context:

A crossbow comprising:
a main beam that has a proximal end, a distal end and an axis of elongation;
a bow assembly mounted to the distal end of the main beam and comprising:

...

- (b) a first bow limb that has: a first end supported to the main beam; a second end that extends from a first side of the main beam toward the proximal end of the main beam; a concave surface that faces the main beam when the bowstring is in the uncocked position; and, a length that is less than 14 inches;
- (c) a second bow limb that has: a first end supported to the main

beam; a second end that extends from a second side of the main beam toward the proximal end of the main beam; a concave surface that faces the main beam when the bowstring is in the uncocked position; and, a length that is less than 14 inches;

...

'595 Patent, col. 8, ll. 63-67; col. 9, ll. 7-18; col. 10, ll. 58-61; col. 11, ll. 1-12. Parker argues that the specification provides no explanation for how the second end of a bow limb extends from the main beam toward the proximal end of the main beam. According to Parker, the figures show the bow limbs extending away from—not toward—the main beam and, therefore, the term is indefinite.

A skilled artisan would have no trouble understanding in the context of this patent what is meant by “a second end that extends from a [first or second] side of the main beam toward the proximal end of the main beam.” Claims 1 and 16 of the '595 Patent disclose a crossbow comprising “a main beam that has a proximal end, a distal end and an axis of elongation.” '595 Patent, col. 8, ll. 63-65; col. 10, ll. 57-59. These claims provide that the bow assembly is “mounted to the distal end of the main beam.” *Id.* at col. 8, ll. 66-67; col. 10, ll. 60-61. The specification explains that the bow assembly includes a bow and bowstring, and that the “bow 32 includes a pair of limbs 36, 36 that receive the bowstring” '595 Patent, col. 4, ll. 12-15. Thus, it is clear which end of the main beam is the distal end (the end to which the bow assembly is mounted) and which is the proximal end (the other end). See, e.g., '595 Patent, Figure 3:

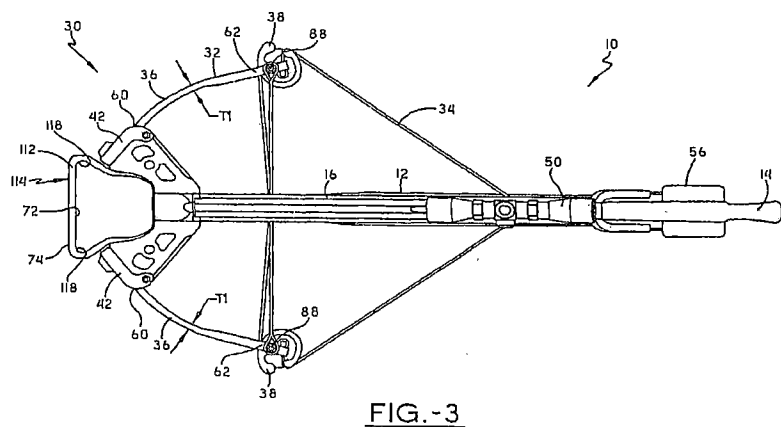


FIG. -3

According to Claims 1 and 16, the first end of the bow limb is supported to the main beam. See '595 Patent, col. 9, ll. 7-8, 13-14; col. 11, ll. 1-2, 7-8. The specification further explains: "Each limb 36 has a first end 60 that is received within the corresponding pocket 42 and a second end 62 that is operatively connected to the bowstring 34." '595 Patent, col. 4, ll. 47-49. Therefore, it is also clear which end of the bow limb is the first end (the end supported to the main beam, marked 60 in Figure 3) and which is the second end (the other end, marked 62).

The patent illustrations leave no question as to what is meant by the disputed claim terms—

Parker insists that Figure 1 of the patent, showing an uncocked crossbow (in contrast to Figure 3, which shows a cocked crossbow), confirms that the second end of the bow limbs does not extend toward the proximal end of the main beam; in fact, “it is clear that the second ends of the bow limbs extend outward, away from the main beam entirely, and do not extend towards *either* end of the main beam, something that [TenPoint] called out as non-infringing.” Parker’s Response Br., ECF No. 54, at 38. The court cannot agree. Like in Figure 3, the second ends of the bow limbs of the crossbow depicted in Figure 1 extend in the general direction of the proximal end of the main beam.



Additionally, the limitations immediately following the ones in dispute, describing bow limbs having “a concave surface that faces the main beam when the bowstring is in the uncocked position,” shed further light on the limitations in dispute and the positioning of the bow limbs. Thus, the court finds Parker has not met its burden of proving these claims are indefinite.

C. Foot stirrup limitations of the ‘719 Patent

1. *“spaced-apart to allow a user’s foot to be inserted therebetween”*

This limitation appears in Claims 1, 2 and 5 of the ‘719 Patent and describes placement of a foot stirrup:

A crossbow comprising:
a bow assembly including a riser and a pair of bow limbs that are
spaced-apart to allow a user’s foot to be inserted therebetween;

719 Patent, col. 8, ll. 23-26, ll. 46-48. Parker argues this limitation fails to define the size of the opening between the bow limbs using any dimensions whatsoever and is “too subjective and indefinite to pass muster.” Parker’s Opening Br., ECF No. 47, at 52. Specifically, Parker contends that this description leaves “one of ordinary skill uncertain as to what sizes and separations between the bow limbs or within the riser are claimed.” *Id.* Parker insists that “neither the specification, nor the claims, nor the figures disclose what dimensions or special arrangements are covered with any reasonable certainty,” Parker’s Resp. Br., ECF No. 54, at 40, and, therefore, these claims are invalid as indefinite.

The specification of the ‘719 Patent describes the foot stirrup component of the crossbow, in its various embodiments, in great detail.

With continued reference now to FIGS. 1-4 and 7-12, an opening 72 may be formed in the riser 40 and may define a foot stirrup 74 which is used, as is well known, in cocking the crossbow 10. In one embodiment, the opening 72 is positioned at least partially directly between the pockets 42, 42. This arrangement provides an opening 72 sufficient to receive most boot sizes yet simultaneously provides a reduced overall length for the crossbow 10 makes it easier to

manually cock the bowstring 34. In another embodiment, the pockets 42, 42 extend at least partially longitudinally beyond the first end of 11 off the main beam 12. This arrangement also provides for an overall reduced length for the crossbow 10. In yet another embodiment, the foot stirrup 74 is made with the riser 40 as a single piece. This permits, for one non-limiting example, the riser 40 and the foot stirrup 74 to be machined from a single piece of material. In one embodiment, the foot stirrup 74 comprises a generally U-shaped member extending from the riser body. The U-shaped member has a pair of leg portions 110, 110 and a mid-portion 112. The mid-portion 112 has an outer surface 114 that is substantially planar and is used in contacting a ground surface (as shown in FIG. 8) when cocking the crossbow 10. The mid-portion 112 in one embodiment is on the same plane as the leg portions 110, 110. In another embodiment, shown, the mid-portion 112 has an offset 116. This offset 116 permits the crossbow 10 to be easily balanced on a ground surface when a user is cocking the crossbow 10. As shown in FIGS. 11-12, the offset 116 may extend downwardly. In one embodiment, the leg portions 110, 110 extend substantially perpendicular from an inner surface of the mid-portion 112. In another embodiment, shown in FIG. 12, each leg portion 110 has an offset 118 that may extend outwardly. This offset 118 permits the opening 72 to be larger to thereby receive a user's foot that is larger and also provides for a longer mid-portion 112 that assists in balancing the crossbow 10 to a ground surface. It should be noted that this inventive riser design is not only applicable to a crossbow having a compound bow but also to a crossbow having other bows when applied with sound judgment by a person of ordinary skill in the art.

Parker argues this detailed passage provides no support for the disputed claim term. It points out that the specification refers to an opening in the riser, not the bow limbs that are referenced in the disputed claims. However, the claims disclose "a riser *and* a pair of bow limbs that are spaced-apart," and the specification discusses both.

To be sure, the specification states that "an opening 72 may be formed in the riser 40 and may define a foot stirrup 74 which is used, as is well known, in cocking the crossbow 10." '719 Patent, col. 6, ll. 6-10. It goes on to explain, however, that "[i]n one embodiment, the opening 72 is positioned at least partially directly between the pockets 42, 42." *Id.* at col. 6, ll. 10-11; see also id. at col. 5, ll. 46-47 (describing one riser design as having "a first end 64 with one pocket 42 and a second end 66 with another pocket 42"). These pockets 42, 42 are described earlier in the

specification as limb pockets that receive the bow limbs 36, 36. Id. at col. 4, ll. 17-19. The specification therefore explains what is meant by “a riser and a pair of bow limbs that are spaced-apart.” See also ‘719 Patent, Fig. 1.

Parker also contends that the description of the size of the opening as being sufficient to “allow a user’s foot to be inserted,” is too subjective, arguing “[b]oots and feet would be of different sizes, and users would engage with stirrup or opening in different fashions, extending an uncertain portion of their foot into the stirrup.” Parker’s Opening Br., ECF No. 47, at 53. As previously discussed, “absolute or mathematical precision is not required” to satisfy the definiteness requirement of § 112. Interval Licensing, LLC v. AOL, Inc., 766 F.3d 1364, 1370 (Fed. Cir. 2014). All § 112 demands is that a “patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120, 2129 (2014). Here, the patent consistently describes the size of the foot stirrup as being sufficient to allow a user’s foot to be inserted therein. The specification goes a step further, describing “an opening 72 sufficient to receive most boot sizes yet simultaneously provid[ing] a reduced overall length for the crossbow 10 makes it easier to manually cock the bowstring 34.” ‘719 Patent, col. 6, ll. 12-15; see also id. at col. 6, ll. 38-39 (describing another embodiment in which the opening is larger “to thereby receive a user’s foot that is larger”). These objective parameters sufficiently inform with reasonable certainty those skilled in the art of the scope of the invention. Indeed, Parker acknowledges that foot stirrups are “extremely well-known in the art.” Parker’s Resp. Br., ECF No. 54, at 39.

Parker argues that in the context of this claim alone, it is unclear how the spacing of the bow limbs is to be judged. This argument is equally unconvincing. “The usage of the disputed claim terms in the context of the claims as a whole [] informs the proper construction of the terms.” Abbott Labs. v. Syntron Bioresearch, Inc., 334 F.3d 1343, 1351 (Fed. Cir. 2003). All five claims of

the '719 Patent disclose locations of the foot stirrup. See, e.g., '719 Patent, col. 8, ll. 29-33 ("said foot stirrup beginning behind said pair of bow limbs and extending beyond said bow limbs, such that a user's foot is insertable into said foot stirrup to support the crossbow for cocking"); id. at col. 8, ll. 34-35 ("wherein a portion of said foot stirrup is located between said pair of bow limbs"); id. at col. 8, ll. 51-54 ("a foot stirrup having a portion adapted for engagement with a user's foot, wherein said portion adapted for engagement with a user's foot extends in a direction away from said bow assembly").

Reading the claims language in the context of the specification and illustrations, one ordinarily skilled in the art would understand, with reasonable certainty, the scope of the invention claimed. Parker has not met its burden by clear and convincing evidence of proving this claim limitation is indefinite.

2. *"a pair of elongated bow limbs, together defining a single bow arc defining a bow plane having a convex side and a concave side and separated by a first region;
a foot stirrup extending from said convex side beyond said concave side; and, where a user's foot is insertable within said first region"*

Parker contends that Claim 3 of the '719 Patent is indefinite. Claim 3 reads in full:

A crossbow comprising:
an elongated main beam;
a pair of elongated bow limbs, together defining a single bow arc
defining a bow plane having a convex side and a concave side and
separated by a first region;
a foot stirrup extending from said convex side beyond said concave
side; and, where a user's foot is insertable within said first region.

'719 Patent, col. 8, ll. 36-42.

One ordinarily skilled in the art reading Claim 3 in the context of the specification and illustrations of the '719 Patent would understand the scope of the invention with reasonable certainty. Specifically, a skilled artisan would understand the basic geometric terms "arc" and

“plane” used in this context—the bow limbs forming an arc²² and the arc defining a plane.²³ A skilled artisan would understand which side of the arc is the convex side and which is concave, and thus be able to determine what is meant by “a foot stirrup extending from said convex side beyond said concave side.” Figure 3 depicts what is described in Claim 3:

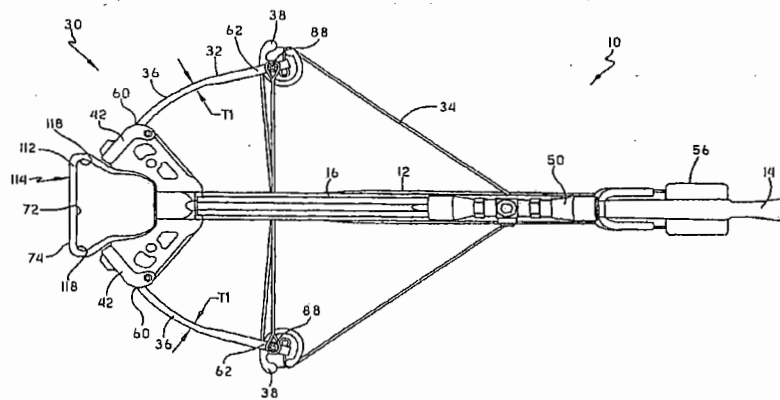


FIG. -3

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²² Parker’s assertion that there are “numerous imaginary lines one could draw between the separated bow limbs to create the complete ‘bow arc’” is simply incorrect. Parker’s Opening Br., ECF No. 47, at 55-56. An arc is an arc.

²³ While the court finds *infra* that the meaning of the term “bow plane” in the context of Claim 4 of the ‘719 Patent is unclear, use of that term is not necessarily fatal to Claim 3. For the reasons set forth herein, the court finds Claim 3 to be sufficiently definite to survive claim construction, as one skilled in the art would be reasonably certain as to the scope of the invention claimed. The court will revisit Parker’s indefiniteness argument concerning Claim 3 at the summary judgment stage when it considers the definiteness of Claim 4.

Parker creates confusion where there is none. The claim means what it says, and one skilled in the art would understand its scope in the context of this patent.

On brief, Parker states that “the limitation carries the similar fault of accusing products where a user’s foot may never been [sic] inserted into the particular region between the bow limbs as still allegedly infringing.” Parker’s Opening Br., ECF No. 47, at 55. It argues further: “the claim does not speak properly to a crossbow where a user may never insert his foot into the ‘first region’ separating the bow limbs, nor insert his foot into any space beyond the concave side of the bow arc (ie., behind the bow limbs).” *Id.* at 57. This argument misses the mark. The claim requires a user’s foot be “insertable”—not that it actually be inserted—within the region separating the bow arc.

And for the same reasons discussed previously, the court rejects Parker’s argument that Claim 3 fails to quantify the size of the region separating the bow limbs. Mathematical precision is not required, Interval Licensing, LLC v. AOL, Inc., 766 F.3d 1364, 1370 (Fed. Cir. 2014), so long as the claims “viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty,” Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120, 2129 (2014). Here, those skilled in the art would understand the parameters of what is claimed. Parker has not met its burden of proving this claim is indefinite.

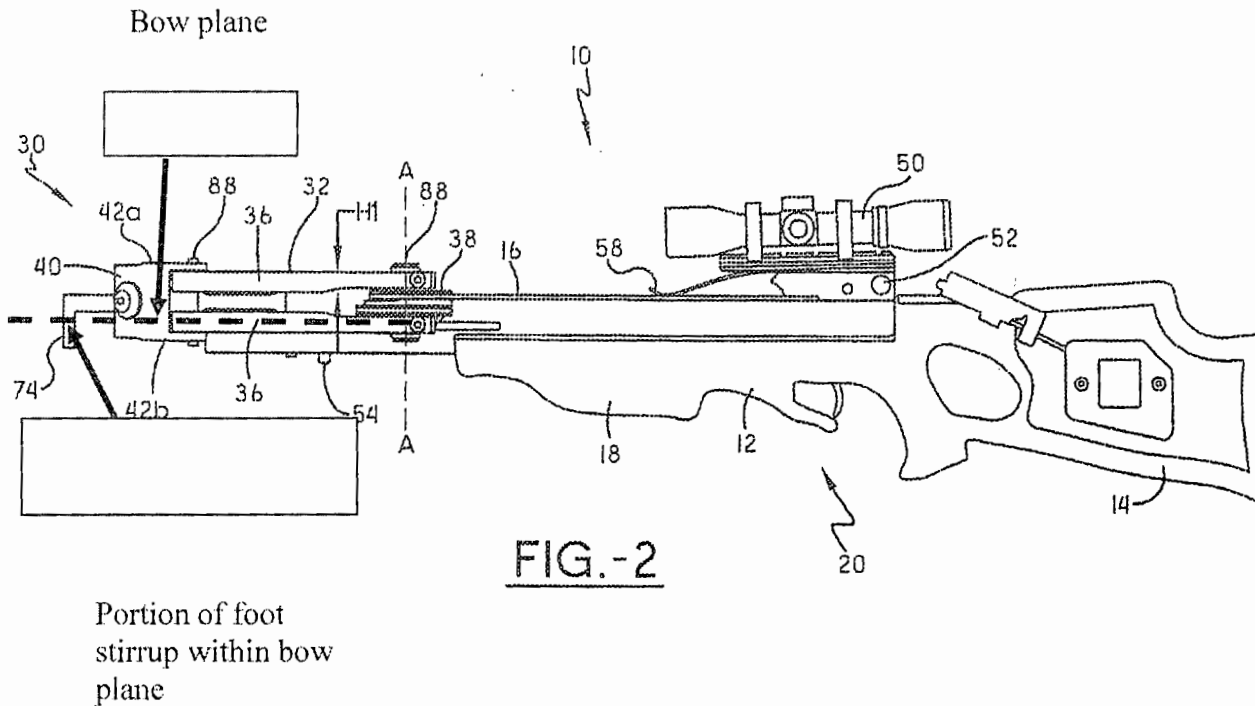
3. *“wherein a portion of said foot stirrup is located between said pair of bow limbs”*

Dependent Claim 2 of the ‘719 Patent claims “[t]he crossbow as set forth in claim 1, wherein a portion of said foot stirrup is located between said pair of bow limbs.” ‘719 Patent, col. 8, ll. 34-35. Parker argues this claim fails to inform with any reasonable specificity or dimensions how the stirrup is placed on the bow. But dimensions are not required for a claim to be definite, see Interval Licensing, LLC, 766 F.3d at 1370, and this claim also means what it says – that a portion of the foot stirrup is located between the pair of bow limbs. Parker has not met its burden of proving indefiniteness as to Claim 2.

4. *"wherein a portion of said foot stirrup is located within said bow plane"*

Parker's argument as to dependent Claim 4 of the '719 Patent, however, is not so easily dismissed. Claim 4 discloses "[t]he crossbow as set forth in claim 3, wherein a portion of said foot stirrup is located within said bow plane." While the meaning of this claim may be clear on its face, its scope is not. "Bow plane" is described in independent Claim 3 as follows: "a pair of elongated bow limbs, together defining a single bow arc **defining a bow plane** having a convex side and a concave side and separated by a first region." '719 Patent, col. 8, ll. 38-40.

A plane in basic geometry is a two-dimensional concept. The McGraw-Hill Dictionary of Scientific and Technical Terms, attached as Exhibit 7 to Parker's Responsive Claim Construction Brief, ECF No. 54-7, defines a plane as "[a] surface such that a straight line that joins any two of its points lies entirely in that surface." Various planes can be defined from points on the bow arc described in Claim 3. TenPoint insists that Figure 2 of the '719 Patent shows "a view looking in the direction of, or along, the bow plane." TenPoint includes an annotated version of this figure in its opening claim construction brief. See TenPoint Opening Br., ECF No. 48, at 67. It uses a dashed, red line running horizontally through a point just below the center of drawing to indicate what it designates as "one bow plane." Id. at 66, 67. TenPoint's annotated figure also shows an arrow pointing to what is marked as 74, which intersects that dashed, red, horizontal line, and labels it: "Portion of foot stirrup within bow plane."



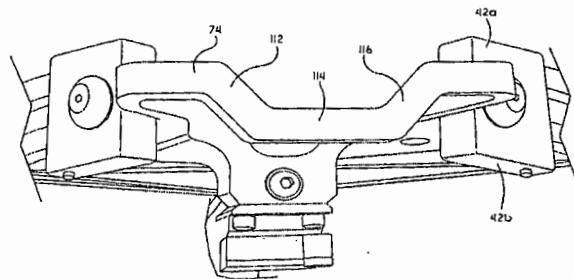
As Parker points out, however, TenPoint

provides no support or reasoning for why it picks that particular bow plane from among the many possible bow plane lines it could have drawn or, more importantly, why a person of ordinary skill would know which of multiple potential bow planes was implicated by [TenPoint's] claim. Indeed, [TenPoint] did not pick a bow plane line that would run through the center of the bow limbs, but instead appears to pick a line towards the bottom of the lower bow limb so that it could be ensured to capture the foot stirrup within the figure.

Parker's Response Br., ECF No. 54, at 43.

It may well be that the patentee intended to use the term "plane" in a particular way in the context of this patent. To be sure, "[t]here is no guarantee that a term is used in the same way in a [technical dictionary] as it would be by the patentee." Phillips v. AWH Corp., 415 F.3d 1303, 1322 (Fed. Cir. 2005). A patentee may act as his own lexicographer, "redefining the meaning of particular claim terms away from their ordinary meaning," but any intent to do so must be expressed in the written description and must be sufficiently clear. Merck & Co. v. Teva Pharm. USA, Inc., 395 F.3d

1364, 1370 (Fed. Cir. 2005). Any special meaning given to the term “bow plane” in the ‘719 Patent is not clearly defined.



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opinion as to its indefiniteness.

Of course, there is a presumption of validity, 35 U.S.C. § 282, and close questions of indefiniteness must be resolved in favor of TenPoint. See Exxon Research & Eng'g Co. v. United States, 265 F.3d 1371, 1380 (Fed. Cir. 2001), abrogated on other grounds by Nautilus, 134 S. Ct. 2120 (2014). Parker has not yet moved for summary judgment on invalidity grounds. Given the high burden borne by Parker and the dispositive effect of an indefiniteness ruling, the court finds Parker's invalidity argument to be more appropriately addressed at summary judgment.

It may be true that determining the indefiniteness of claim language is a question of law "that is drawn from the court's performance of its duty as the construer of patent claims," which is the same duty that gives rise to the Markman hearing. Exxon, 265 F.3d at 1373. However, this does not outweigh the previous practical considerations that militate against determining indefiniteness prior to the end of fact or expert discovery.

Waddington N. Am., Inc. v. Sabert Corp., No. CIV.A. 09-4883 GEB, 2010 WL 4363137, at *3 (D.N.J. Oct. 27, 2010). As such, the court defers any ruling as to the indefiniteness of Claim 4 until summary judgment.

5. *"wherein said portion adapted for engagement with a user's foot extends in a direction away from said bow assembly"*

Finally, Parker takes issue with the limitation in Claim 5 of the '719 Patent, which reads:

a foot stirrup having a portion adapted for engagement with a user's foot, wherein said portion adapted for engagement with a user's foot extends in a direction away from said bow assembly.

'719 Patent, col. 8, ll. 51-54. Parker's argument centers on the fact that the patent does not explain in which "direction" the foot stirrup must extend: "There are an infinite number of 'directions' that a portion 'adapted for engagement with a user's foot' could 'extend' away from the bow assembly." Parker's Opening Br., ECF No. 47, at 59.

The court rejects this argument and finds the scope of this claim would be clear to one ordinarily skilled in the art. The specification describes the portion of the foot stirrup adapted for

engagement with a user's foot:

In one embodiment, the foot stirrup 74 comprises a generally U-shaped member extending from the riser body. The U-shaped member has a pair of leg portions 110, 110 and a mid-portion 112. The mid-portion 112 has an outer surface 114 that is substantially planar and is used in contacting a ground surface (as shown in FIG. 8) when cocking the crossbow 10.

'719 Patent, col. 6, ll. 22-28. This is illustrated in Figure 11:

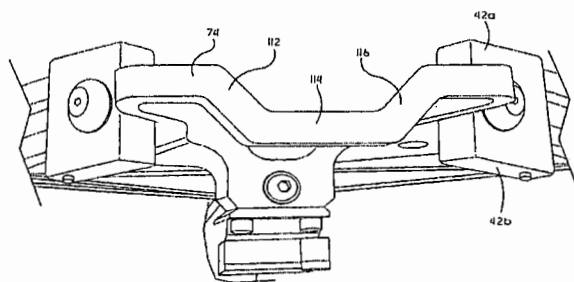


FIG. -II

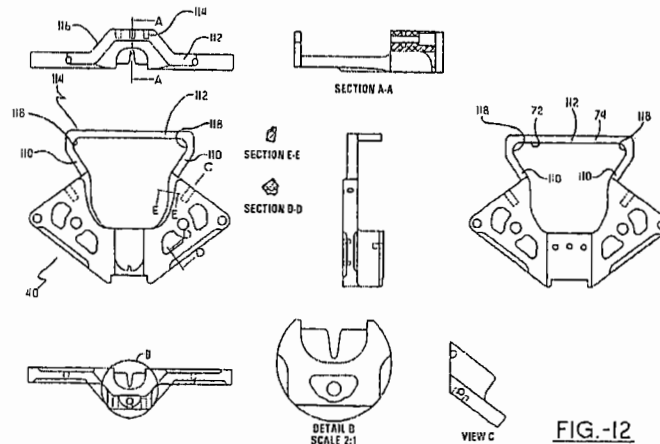
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The specification goes on to explain various embodiments of this foot stirrup:

The mid-portion 112 in one embodiment is on the same plane as the leg portions 110, 110. In another embodiment, shown, the mid-portion 112 has an offset 116. This offset 116 permits the crossbow 10 to be easily balanced on a ground surface when a user is cocking the crossbow 10. As shown in FIGS. 11-12, the offset 116 may extend downwardly. In one embodiment, the leg portions 110, 110 extend substantially perpendicular from an inner surface of the mid-portion 112. In another embodiment, shown in FIG. 12, each leg portion 110 has an offset 118 that may extend outwardly. This offset

118 permits the opening 72 to be larger to thereby receive a user's foot that is larger and also provides for a longer mid-portion 112 that assists in balancing the crossbow 10 to a ground surface.

'719 Patent, col. 6, ll. 28-41. Figure 12 is illustrative:



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From this description and the illustrations, one skilled in the art would understand what is meant by the “portion [of the foot stirrup] adapted for engagement with a user’s foot” in the context of this patent.

Additionally, a skilled artisan would understand with reasonable certainty which direction the claimed portion of the foot stirrup extends. Claim 5 states that the relevant portion of the foot stirrup extends “in a direction away from” the bow assembly. The patent clearly identifies the bow assembly, see, e.g., ‘719 Patent, col. 4, ll. 10-20; thus, a skilled artisan would understand which direction is “away from” the bow assembly. The scope of this claim limitation is especially clear in light of the patent illustrations. See, e.g., ‘719 Patent, Fig. 1, Fig. 3.

This case is unlike the one cited by Parker, Abdou v. Alphatec Spine, Inc., No. 12-CV-1804 BEN (RBB), 2014 WL 6611422, at *8-9 (S.D. Cal. Nov. 19, 2014).²⁴ In Abdou, which was before the court on summary judgment, the court found indefinite certain terms including “defined anatomical position,” “defined anatomical relationship,” “defined spatial relationship,” and “in proximity,” which appeared in claims of two patents entitled “Devices and Methods for Inter-Vertebral Orthopedic Device Placement,” directed toward the treatment of diseases of the spine. The court previously held that these relationships “are limited by the necessity that the surgical site be accurately targeted and that the mount, anchor device, or fixation member be positioned to limit movement.” Id. at *9. In considering indefiniteness at the summary judgment stage, the court found that “nothing in the claims or specification tells a person of ordinary skill in the art what the anatomical position, anatomical relationship, spacial relationship, or proximity should be to accurately target the surgical site.” Id. at *9. Thus, “the absence of identified boundaries in terms of proximity, distance, or location render[ed] the claims indefinite” under the “new, more rigorous” Nautilus standard. Id. at *8, 9-10.

The facts of Abdou are distinguishable from those before the court with respect to Claim 5 of the ‘719 Patent. The limitation describing a portion of the foot stirrup that “extends in a direction away from said bow assembly,” read in the context of the specification and patent illustrations (specifically Figures 1 and 3), provides sufficient objective boundaries to allow one ordinarily skilled in the art to understand the scope of the invention with reasonable certainty. Parker has not met its burden of proving Claim 5 is indefinite.

²⁴ Abdou is currently on appeal to the Federal Circuit.

VI.

For the foregoing reasons, the court rules as follows:

1. The terms “bow limb” and “bow limbs” are construed to mean bow limb or bow limbs that have a thickness that varies continuously from the first end to the hinge point.
2. Claim 4 of the ‘595 Patent is corrected to read “the length of the first bow limb is between 11 and 12 inches; and, the length of the second bow limb is between 11 and 12 inches.”
3. The term “between” two numerical values does not require construction and will be given its plain and ordinary meaning. However, the court finds the scope of this limitation includes the endpoints.
4. The term “a foot stirrup mounted to said first end of said main beam” does not require construction and will be given its plain and ordinary meaning. However, the court finds the scope of this limitation does not require direct mounting.
5. The term “a riser that comprises: a connection portion that connects the riser to an end of the main beam” does not require construction and will be given its plain and ordinary meaning. However, the court finds the scope of this limitation does not require the separate, direct attachment of the riser and the bow assembly to the main beam.
6. The court defers a final ruling as to the indefiniteness and validity of Claim 4 of the ‘719 Patent until summary judgment.
7. As to the remaining claim terms in dispute, the court finds Parker has not met its burden of proving indefiniteness, given the standard set forth by the United States Supreme Court in Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120 (2014).

An appropriate Order will be entered.

Entered: 02-12-2016

/s/ Michael F. Urbanski

Michael F. Urbanski
United States District Judge